

INTERNATIONAL FOOD INFORMATION SERVICE

The logo for the International Food Information Service (ifis) is displayed in a stylized, red, lowercase serif font. The letters 'i', 'f', and 's' are connected, with the 'f' having a long, sweeping descender. The 'i' and 's' have dots. The logo is set against a white rectangular background, which is itself placed on a solid red horizontal band.

FAB 47

FOOD SCIENCE AND TECHNOLOGY BOOKS

SELECTED FROM VOLUME 9

FOOD SCIENCE AND TECHNOLOGY ABSTRACTS

under the direction of

Commonwealth Agricultural Bureaux, Farnham Royal, Bucks; Gesellschaft für Information und Dokumentation, Frankfurt am Main; Institute of Food Technologists, Chicago; Centrum voor Landbouwpublikaties en Landbouwdocumentatie (Pudoc), Wageningen.

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ABBREVIATIONS

**These entries are used in addresses only*

A	ampere	*Div.	Division	*Int.	International
abstr.	abstract	DM	dry matter. Deutsche Mark	IR	infrared
*Acad.	Academy etc.	DNA	deoxyribonucleic acid(s)	IU	international unit
Akad.		DSA	Dairy Science Abstracts	J	joule
ad lib.	Ad libitum			Jan.	January
*Agric.	Agriculture, Agricul- tural etc.			k-	kilo- (as in kcal. kg)
AI	Artificial insemination	E.	East, Eastern etc.	kgf	kilogram-force
a. m.	ante meridiem	EEC	European Economic Community	*Ltd.	Limited
Anon.	Anonymous	e. g.	for example	l.	litre
AOAC	Association of Official Analytical Chemists	Eh	Oxidation-reduction potential	*Lab.	Laboratory
approx.	approximately	*Eng.	Engineering etc.	lb	pound
*Assoc.	Association	*Expt.	Experiment etc.	lbf	pound-force
atm.	atmosphere			m	metre
Aug.	August	f	femto-(10 ⁻¹⁵ , as in fCi)	m-	milli- (as in mg, ml, mm)
*Bact.	Bacteriology	°F	degree Fahrenheit	m-equiv.	milli-equivalent
*Biochem.	Biochemistry	*Fac. Fak.	Faculty etc.	M	molar concentration
*Biol.	Biology	FAO	Food and Agricul- tural Organization	M-	Mega- (as in Mrad)
BOD	biological oxygen demand	FDA	Food and Drug Administration	max.	maximum
bp	boiling point	Feb.	February	*Med.	Medicine etc.
Btu	British thermal unit	*Fed.	Federal, Federation etc.	*Micro- biol.	Microbiology
c-	centi- (as in cm, cm ² , cm ³)	fl oz	fluid ounce	min	minute (time)
°C	degree Celsius (Centigrade)	fp	freezing point	min.	minimum
cal	calorie	FSTA	Food Science and Technology Abstracts	Min.	Ministry
cd	candela	ft	foot, feet	mol	mole
*Chem.	Chemistry	g	gram	mol. wt.	molecular weight
Ci	curie	g	gravity	mp	melting point
CMT	California mastitis test	gal	gallon	MPN	Most Probable Number
COD	chemical oxygen demand	GLC	gas-liquid chromato- graphy	MS	mass-spectrometry
coeff.	coefficient	*Govt.	Government	n-	nano- (10 ⁻⁹ , as in nm)
*Coll.	College			N	Newton (kg m/sec ²)
*Co.	Company	h	hour	N.	North, Northern etc.
conc.	concentrated	ha	hectare	N	normal concentration
concn.	concentration	hl	hectolitre (100 l.)	*Nat.	National
*Corp.	Corporation	hp	horse power	*Nauchno- issled.	Nauchno-Issledo- vatel'skogo etc.
CSIRO	Commonwealth Scientific and Industrial Research Organization	HTST	high temperature short time	*NSW	New South Wales
cwt	hundredweight	Hz	hertz (frequency/sec)	NMR	Nuclear magnetic resonance
Dec.	December			Nov.	November
*Dept.	Department	i. e.	that is	*Nutr.	Nutrition etc.
detn.	determination	in	inch	Oct.	October
DHIA	Dairy Herd Improve- ment Association	*Inc.	Incorporated	oz	ounce
diam.	diameter	*Ind.	Industry etc.	p-	pico- (10 ⁻¹² , as in pCi)
dil.	dilute	*Inst.	Institute etc.	P	Poise
				Pathol.	Pathology

*Physiol.	Physiology etc.	SNF	solids-not-fat	V	volt
p.m.	post meridiem	sp., spp.	species	var.	variety
ppm	parts per million	sp. gr.	specific gravity	*Vet.	Veterinary
PVC	polyvinyl chloride	*St.	State etc.	vol.	volume
PVDC	polyvinylidene chloride	*Sta.	Station etc.	*Vses.	Vsesoyuznyi etc.
		summ.	Summary	v/v	volume/volume
				vs.	versus
qt	quart	t	metric tonne (1000 kg)	W	watt
r	röntgen	TDN	total digestible nutrients	W.	West, Western etc.
rad	rad or radian	*Tech.	Technical, Technology etc.	WHO	World Health Organization
ref.	reference(s)	temp.	temperature	w/v	weight/volume
*Res.	Research	TLC	thin layer chromatography	wk	week
rev/min	revolutions per minute	TS	total solids	wt.	weight
RH	relative humidity	UHT	ultra-high temperature	yd	yard
RNA	ribonucleic acid(s)	UK	United Kingdom	yr	year
		*Univ.	University etc.	μ-	micro- (as in μg, μm)
S.	South, Southern etc.	USA	United States of America	%	per centum
*Sci.	Science, Scientific etc.	USDA	United States Department of Agriculture	>	greater than
SD	Standard deviation	USSR	Union of Soviet Socialist Republics	≥	greater than or equal to; not less than
SE	starch equivalent			<	less than
SEM	standard error of the mean	*Util.	Utilization	≤	less than or equal to; not greater than
s	second (time)	UV	ultraviolet		
*Sel'-skokhoz.	Sel'skokhozyaistvennoi etc.				
Sept.	September				

Chemical symbols are used for all elements.

ABBREVIATIONS FOR LANGUAGES

	<i>Language of text</i>	<i>Language of summaries</i>		<i>Language of text</i>	<i>Language of summaries</i>
Afrikaans	Af	af	Interlingua	Ia	ia
Albanian	Al	al	Italian	It	it
Arabic	Ar	ar	Japanese	Ja	ja
Armenian	Am	am	Kazakh	Ka	ka
Azerbaidzhan	Az	az	Korean	Ko	ko
Belorussian	Be	be	Latvian	Lv	lv
Bulgarian	Bg	bg	Lithuanian	Li	li
Chinese	Ch	ch	Macedonian	Ma	ma
Czech	Cs	cs	Malay	My	my
Danish	Da	da	Norwegian	No	no
Dutch	Nl	nl	Polish	Pl	pl
English	En	en	Portuguese	Pt	pt
Estonian	Ee	ee	Roumanian	Ro	ro
Finnish	Fi	fi	Russian	Ru	ru
French	Fr	fr	Serbo-croat	Sh	sh
Georgian	Ge	ge	Sinhali	Si	si
German	De	de	Slovak	Sk	sk
Greek	Gr	gr	Slovenian	Sn	sn
Hebrew	He	he	Spanish	Es	es
Hungarian	Hu	hu	Swedish	Sv	sv
Indonesian	In	in	Turkish	Tr	tr
			Ukrainian	Uk	uk

INTRODUCTION

Food Annotated Bibliographies (FABs) are collections of abstracts on specific topics in food science and technology. The topics are chosen by the staff of the International Food Information Service as being of particular interest or importance. The topics normally interest individual workers, who may not require the full information provided in Food Science and Technology Abstracts, from which the abstracts for FABs are taken. The size and the cost of the FABs are controlled as much as possible with the interests of individual workers in mind.

Titles of the FABs now available are given on the back cover of this booklet. New titles are being added at the rate of about 10 per year. For up-to-date lists of FABs or suggestions for new topics please write to the address given overleaf. New subjects are searched for at least the five most recent volumes of Food Science and Technology Abstracts. Thereafter each FAB is updated monthly. Copies of each month's abstracts on any topic may be obtained as indicated on the back cover of this publication. At the end of each volume of up-dating, the abstracts are merged and made available as a separate supplement to the original FAB.

Some of the larger FABs have been divided into sections to facilitate use. Abstracts are not printed in more than one section. The larger FABs also have subject indexes provided.

Copies of all original articles referred to in the abstracts may be bought (or occasionally borrowed) from the International Food Information Service. A form for ordering these is provided at the end of this FAB.

Coverage of the subject has been restricted to that of Food Science and Technology Abstracts, which covers over 1200 of the important food journals, patents from 20 countries and books published world-wide. Every effort is made to include all significant references, but editorial discretion is used on the many articles of borderline interest. If the reader particularly needs an exhaustive search of the subject, we will be pleased to provide any other references that we have available. We would, in any case, encourage readers to write or telephone us with any comments or queries that they may have.

H. BROOKES

ASSISTANT EDITOR

FEBRUARY, 1978

ABSTRACTS

DICTIONARIES, DIRECTORIES

1

[National milk annual.] Annuaire National du Lait. [Book]
Anon.
Ed. 26, vi + 736pp. (1976) [Fr] Paris, France; Les Editions Comminus

This comprehensive directory on the French dairy industry consists of 4 parts. Part I deals with national professional organizations, legislation, dairy education, and labelling of cheese; part II deals with production and processing (listing local professional organizations, and processors arranged alphabetically and by product); part III gives and index of suppliers to the dairy industry; and part IV lists agents, wholesalers, exporters, etc. FL

2

Trade names dictionary. Vol. 1. A-L; Vol. 2. M-Z. [Book]
Crowley, E. T.; Crocker, C.; Wood, D. (Editors)
Ed. 1, xxx + 666pp. ISBN 0-8103-0692-1 (1976)
[En] Book Tower, Detroit, Michigan 48226, USA; Gale Research Co. Price \$65.00

This directory, in 2 volumes (A-L and M-Z), indexes trade names, brand names, product names, coined names, model names and design names, with addresses of their manufacturers, importers, marketers or distributors in a single alphabetical sequence. It covers the entire spectrum of consumer-related items in the USA, including food, candy, dairy products, beverages, etc. AL

3

[NAERINFO thesaurus. I. NAERINFO - a project for provision of information in the food field.] Naerinfo-tesaurus. I. Naerinfo - et prosjekt om informasjon innen naeringsmiddelomradet. [Book]
Norway, Norsk Senter for Informatik
118 pp. (1976) [No] Oslo, Norway

This Norwegian-language thesaurus is the result of collaboration between 5 different Norwegian research organizations, representing the brewing, herring oil and meal, potato and general industries. It is designed specifically as an aid to the construction of a common data bank. Use of broader, narrower, and related terms and preferred synonyms gives the Thesaurus, which is based on the word list used in Food Science and Technology Abstracts, a certain amount of structuring. HBr

4

[Dictionary of useful plants.] Słownik roślin użytkowych. [Book]
Podbielkowski, Z.
524pp. (1974) [many ref. Pl, En, De, Fr, Ru]
Warsaw, Poland; Verlag Panstwowe Wydawnictwo Rolnicze i Lesne Price zł100

This 6-language dictionary contains a total of 1229 entries, 461 of which are illustrated by drawings. Coverage includes trees, shrubs, grasses, flowers, edible fungi, vegetables, etc. The main language of the book is Polish, each entry having a number, to which reference is made in the alphabetical listings of the other 5 languages. Each entry gives the name in all 6 languages, plus a brief description in Polish of the characteristics of the plant etc. concerned. HBr

5

Frozen food factbook and directory. [Book]
United States of America, National Frozen Food Association
366pp. (1976) [En] One Chocolate Avenue, Hershey, Pennsylvania 17033, USA; National Frozen Food Association Price \$50.00

This factbook and directory contains the following lists: National Frozen Food Association (NFFA) officials (pp. 6, 8, 10); Regional Frozen Food Associations (pp. 22, 24, 28-29); Profile 1975 - the consumer and the frozen food industry (pp. 41-100); Certified full service wholesalers (pp. 102-104); Regional and national associations allied to the frozen food industry or serving it directly (pp. 106-107); Alphabetical listing of NFFA member companies (pp. 108-123); Alphabetical listing by state, of NFFA Distributor members (pp. 125-187); Alphabetical listing by state, of NFFA Broker members (pp. 188-249); Alphabetical listing of NFFA Packer members (pp. 250-302); NFFA Supplier members listed by product category (pp. 303-317); Alphabetical listing by state, of Warehouse members (pp. 318-332); and Alphabetical listing of over 3500 Frozen Food Industry executives and their telephone numbers (pp. 335-364). VJG

6

The almanac of the canning, freezing, preserving industries. [Book]
Edward E. Judge & Sons, Inc.
Ed. 61, 602pp. (1976) [En] 79 Bond Street, Westminster, Maryland 21157, USA Price \$15.00

This 61st annual compilation of basic references for the canning, freezing, preserving and allied industries contains the following sections. Association officers and US inspectors (pp. 6-27); Food laws and regulations (pp. 28-103); Labeling and packaging (pp. 104-167); Food & Drug standards of identity, quality and fill (pp. 168-267); USDA quality grade standards canned, glass and frozen (pp. 268-402); Raw products, crop statistics (pp. 403-443); US pack statistics (pp. 444-511); Canned food prices (pp. 512-520); International trade and world packs (canned, frozen and preserved foods) (pp. 521-537); Appendix (pp. 538-548); and Buyers' guide - machinery, supplies, services (pp. 555-598). [See FSTA (1972) 4 6A298 for 56th edition] VJG

7

New trade names 1976. [Book]
Crowley, E. T. (Editor)
xv + 111pp. ISBN 0-8103-0693-X (1976) [En]
Book Tower, Detroit, Michigan 48226, USA: Gale Research Co.

This publication is the first of 2 supplements to Trade names dictionary [see FSTA (1977) 9 2A88]. The price of \$45 includes New trade names 1977, which will be ready in spring 1978. AL

GENERAL

8

Braverman's introduction to the biochemistry of foods. [Book]

Berk, Z.
xii + 315pp. (1976) [many ref. En] Amsterdam, Netherlands; Elsevier Scientific Publishing Co.
Price £49.50 [Dep. of Food Eng. ° Biotech., Technion-Israel Inst. of Tech., Haifa, Israel]

This completely new edition, dedicated to the memory of J. B. S. Braverman, author of Introduction to the biochemistry of foods (1963), deals with a study of the composition of foods and the reactions which lead to changes in their constitution and characteristics. Major reviews and primary information sources are listed at the end of each chapter. Chapters are: Introduction (pp. 1-4, 8 ref.); Proteins, in general (pp. 5-25, 7 ref.); Enzymes (pp. 27-41, 8 ref.); Enzyme kinetics (pp. 43-59, 4 ref.); Protein systems in foods (pp. 61-78, 12 ref.); Carbohydrates - monosaccharides (pp. 79-100, 3 ref.); Carbohydrates - oligosaccharides (pp. 101-109, 4 ref.); Polysaccharides (pp. 111-130, 6 ref.); Pectic substances, plant gums (pp. 131-147, 10 ref.); Nonenzymic browning (pp. 149-167, 8 ref.); Lipids (pp. 169-183, 6 ref.); Carotenoids (pp. 185-194, 9 ref.); Terpenes, essential oils (pp. 195-208, 6 ref.); Steroids and tocopherols (pp. 209-218, 6 ref.); Lipid oxidation (pp. 219-233, 8 ref.); Phenolic compounds (pp. 235-247, 5 ref.); Enzymic

browning (pp. 249-256, 6 ref.); Respiration (pp. 257-277, 6 ref.); Biochemical activity of microorganisms in foods (pp. 279-287, 4 ref.); and Chlorophyll and photosynthesis (pp. 289-304, 5 ref.). AL

9

[Toxic fungi in foods.] Moisissures toxiques dans l'alimentation. [Book]

Moreau, C.
Ed. 2, xi + 471pp. ISBN 2-225-38962-4 (1974)
[2938 ref. Fr] Paris, France; Masson & Cie

This revised and enlarged 2nd edition of the book first published in 1968 contains the following chapters: Fungi in foods (pp. 3-30); Mycotoxicoses and mycotoxins (pp. 31-70); Aflatoxicosis (pp. 71-163); Clavacitoxicosis (pp. 165-179); Aspergillotoxicoses (pp. 181-216); Islanditoxicosis (pp. 217-225), caused by *Penicillium islandicum*; Penicillitoxicoses (pp. 227-248); Fusariotoxicoses (pp. 249-270); Sporidesmiotoxicoses (pp. 271-278), caused by *Pithomyces chartarum*; Stachybotryotoxicosis (pp. 279-286); Various other mycotoxicoses (pp. 287-308); and Future perspectives (pp. 309-322). The book concludes with a bibliography (pp. 323-452) and a subject index (pp. 453-471). JA

10

A renal failure diet manual utilizing the food exchange system. [Book]

Spitzer, M. E.; Dickinson, B. B.; Rogers, P. W.
ix + 121pp. ISBN 0-398-03466-4 (1976) [En]
Springfield, Illinois, USA; Charles C. Thomas
Publisher Price \$7.50 [US Army Inst. of Surgical Res., Fort Sam, Houston, Texas, USA]

This manual outlines the electrolyte, protein, water and caloric content of a variety of foods to assist patients with chronic renal failure in the preparation of their own meals. It may also be used by dietitians and physicians. Detailed recipes, sample exchange patterns and 7-day and 5-day meal plans are also included. GL

11

Refined carbohydrate foods and disease. Some implications of dietary fibre. [Book]

Burkitt, D. P.; Trowell, H. C. (Editors)
xiii + 356pp. ISBN 0-12-144750-2 (1975) [many ref. En] London, UK; Academic Press Inc., Ltd.
Price £7.80 [Med. Res. Council, 172 Tottenham Court Road, London W1P 9LG, UK]

This book provides evidence that major health problems characteristic of modern western civilization may be related to a reduction in consumption of fibre depleted starchy foods. It is divided into 10 parts including: Disease and environment; Refined carbohydrate foods; Refined carbohydrate foods in the gastrointestinal tract; Diseases of the large intestine; and Other disorders related to refined carbohydrate foods. The chapters include: Refined carbohydrate foods and fibre, by H. Trowell (pp. 23-41, 66 ref.); Some historical aspects of milling cereals and refining sugar, by H.

Trowell (pp. 43-46, 7 ref.); Dietary changes in modern times, by H. Trowell (pp. 47-56, 14 ref.); and The effects of carbohydrate refining on food ingestion, digestion, and absorption, by K. Heaton (pp. 59-67, 23 ref.). GL

12

By bread alone. [Book]

Brown, L. R.; Eckholm, E. P.

xi + 272pp. ISBN 0-08-019794-9 (Flexicover) & ISBN 0-08-019946-1 (Hardcover) (1975) [many ref. En] Oxford, UK; Pergamon Press Ltd. Price £2.75 (Flexicover) £4.50 (Hardcover)

This book, published for the Overseas Development Council, is an interdisciplinary analysis of future world food production prospects. Two policy recommendations warrant highlighting: a cooperative effort to increase production in poorer nations, particularly on smaller farms; and slowing of demand for food by reducing the birthrate, and by reducing grain consumption by affluent countries. Following the introductory chapter, Overview: the changing face of food scarcity (pp. 3-16), the book is divided into 5 sections: Dimensions of the problem (pp. 19-72); Four basic resources (pp. 75-130); Areas of concern and hope (pp. 133-176); Responses (pp. 179-237); and Toward century's end (pp. 241-253). Individual chapters of food interest include: Growing global food insecurity (pp. 58-72); Energy and agriculture (pp. 105-113); Non-conventional food sources (pp. 164-176); Simplifying diets (pp. 197-208); and Alleviating insecurity: special measures (pp. 226-237). AL

13

[Technology of foods and raw materials of animal origin.] Technologie potravín a surovin živočišného původu. [Book]

Matyas, Z.; Holec, J.

400pp. (1973) [Cs] Prague, Czechoslovakia; Statní pedagogické nakladatelství. Price 19Kcs

The book is intended as a textbook for students of veterinary medicine, designed to acquaint them with the basic methods of production, processing, transportation and storage of foods of animal origin. The following chapters are included: General technology of foods and raw materials of animal origin (pp. 7-50); Technology of individual kinds of foods and raw materials of animal origin (p. 51); Technology of meat and other slaughterhouse products (pp. 51-215); Technology of slaughterhouse by-products (pp. 215-245); Technology of milk and dairy products (pp. 245-304); Technology of poultry processing (pp. 305-338); Technology of egg processing (pp. 338-362); Technology of fish processing (pp. 363-384); Technology of game processing (pp. 385-388). STI

14

Introductory foods. [Book]

Bennion, M.; Hughes, O.

Ed. 6 vii + 550pp. ISBN 0-02-308160-4 (1975)

[En] New York, USA; Macmillan Publishing Co., Inc.

This sixth edition has been extensively revised to reflect the present-day concerns about food and the many meanings of food in the lives of people. The illustrations in earlier editions have been evaluated and some have been replaced. Additional colour photographs have been added, including photographs of meat. Chapters included are: Introduction to the study of food (pp. 1-35, 54 ref.); Introduction to nutrition (pp. 36-53, 13 ref.); Fruits and fruit preparation (pp. 54-80, 23 ref.); Vegetables and vegetable preparation (pp. 81-118, 36 ref.); Salads (pp. 119-134, 3 ref.); Meat and meat cookery (pp. 135-191, 53 ref.); Poultry and fish (pp. 192-218, 19 ref.); Milk and milk products (pp. 219-255, 21 ref.); Eggs and egg cookery (pp. 256-283, 21 ref.); Fats (pp. 284-300, 12 ref.); Sugars and sugar cookery (pp. 301-323, 4 ref.); Starch and cereals (pp. 324-348, 13 ref.); Batters and doughs (pp. 349-416, 37 ref.); Coffee, tea and cocoa (pp. 417-434, 13 ref.); Frozen desserts (pp. 435-447, 5 ref.); Food preservation (pp. 448-507, 42 ref.); and Meal planning (pp. 508-526, 5 ref.). 4 appendices are included: Weights and measures (pp. 527-530); Temp. control in food preparation (pp. 531-532); Microwave cooking (pp. 533-536); and Glossary (pp. 537-540). VJG

15

[Research projects in agriculture, nutrition, forestry, the timber industry and veterinary medicine, 1974. II. Animal production and veterinary medicine.] Forschungsvorhaben im Bereich der Landbau-, Ernährungs-, Forst- und Holzwirtschaftswissenschaften sowie der Veterinärmedizin, 1974. II. Tierische Produktion/Veterinärmedizin. [Book] Germany, Federal Republic of, Zentralstelle für Agrardokumentation und -information iv + 424pp. (Undated) [De] Bonn-Bad Godesberg, Federal Republic of Germany; Bundesministerium für Ernährung, Landwirtschaft und Forsten [Heerstrasse 110, 5300 Bonn-Bad Godesberg, Federal Republic of Germany]

This publication lists 1518 research projects in animal production and veterinary medicine in progress in 1974 at research institutes, universities, etc. in the Federal Republic of Germany, including projects related to the production and quality of foods of animal origin. A 13-pp. author index and a 76-pp. subject index are included. AJDW

16

Advances in biochemical engineering. [Book]

Ghose, T. K.; Fiechter, A.; Blakebrough, N. (Editors)

Advances in Biochemical Engineering 4, 172pp.

(1976) [many ref. En] Heidelberg, Federal Republic of Germany; Springer-Verlag Price \$24.60 [Div. Biochem. Eng., Indian Inst. of Tech., Hanz Khas, New Dehli 110029, India]

This issue contains the following 4 chapters: Transfer of O₂ and scale-up in submerged aerobic

fermentation, by Y. Miura (pp. 3-40, 67 ref.); Microbial flocs and flocculation in fermentation process engineering, by B. Atkinson & I. S. Daoud (pp. 41-124, many ref.); Analog/hybrid computation in biochemical engineering, by P. L. Rogers (pp. 125-153, 60 ref.); and Preparation and properties of gel entrapped enzymes, by K. F. O'Driscoll (pp. 155-172, 54 ref.). VJG

17

Nutrition and agricultural development. Significance and potential for the tropics. [Book] Scrimshaw, N. S.; Behar, M. **Central America**, Institute of Nutrition of Central America & Panama (Editors) xxiv + 500pp. ISBN 0-306-36507-3 (1976) [many ref. En] New York, USA; Plenum Press Price \$47.40

This book, Vol. 7 in Basic Life Sciences series, contains the proceedings of the 14th International Biological Symposium held in Guatemala City, Guatemala, on 2-6 Dec. 1974, to celebrate the 25th Anniversary of the Institute of Nutrition of Central America and Panama (INCAP). Topics dealt with were: Food and nutrition problems (pp. 3-118); Technological and ecological problems limiting the production of food (pp. 121-192); Problems in the postharvest conservation, processing and distribution of food (pp. 195-233); Social and economic problems limiting food supplies and consumption (pp. 237-287); What can be done to break the vicious circle? (pp. 291-420); and Application of science and technology to long-range solutions (pp. 423-486). Individual papers include: Balancing the benefits and risks of the application of science to agriculture and food production, by W. J. Darby, with comments by A. E. Olszyna-Marzys (pp. 185-192, 5 ref.); Post-harvest losses - impact of their prevention on food supplies, nutrition and development, by H. A. B. Parpia (pp. 195-206, 16 ref.) [Continued in following abstr.]. AL

18

Nutrition and agricultural development. Significance and potential for the tropics. [Book] Scrimshaw, N. S.; Behar, M. **Central America**, Institute of Nutrition of Central America & Panama (Editors) xxiv + 500pp. ISBN 0-306-36507-3 (1976) [many ref. En] New York, USA; Plenum Press Price \$47.40

[Continued from preceding abstr.] Control of postharvest losses caused by fungi in food and feed grains, by C. M. Christensen & H. H. Kaufmann (pp. 207-213, 4 ref.); Food processing problems and potential, by J. H. Hulse (pp. 215-233, 6 ref.); Food distribution - limitations on supplies and consumption, by J. C. Abbott (pp. 237-246, 2 ref.); Improving the production and nutritional quality of food legumes, by L. M. Roberts (pp. 309-323, 15 ref.); Fisheries prospects for the future - freshwater and marine, by J. E. Bardach (pp. 375-397, 30 ref.); Fortification of foods with nutrients, by R.

S. Harris (pp. 407-420, 19 ref.); Genetics of food crop improvement, by D. D. Harpstead & M. W. Adams (pp. 443-464, 50 ref.); Genetic improvement of cereal proteins, by E. T. Mertz (pp. 465-472, 9 ref.); and Production and use of protein concentrates, by S. R. Tannenbaum (pp. 473-486, 12 ref.). A subject index and index of countries and geographical areas are included. AL

19

Food for free. [Book]

Mabey, R. 192pp. (1975) [69 ref. En] Glasgow, UK; William Collins Sons & Co. Ltd. Price £1.75

This book covers the majority of wild food products which can be obtained in the British Isles. It is divided into sections that correspond to food types, every entry being given a category rating of A, B, or C. A entries are common, good to eat and are treated in full, B entries are as A but are given nominal treatment because they bear close resemblance to the preceding A entry, and C entries are included for historical interest. Information presented includes latin name, local names, details of plant's distribution, and recipes for its use. Sections included in the book are: Shellfish (pp. 21-28); Nuts (pp. 29-36); Fungi (pp. 37-59); Plants with edible roots (pp. 59-74); Salad herbs (pp. 75-87); Greens (pp. 88-106); Stems (pp. 107-115); Seaweeds (pp. 116-120); Herbs (pp. 121-144); Spices (pp. 145-148); Flowers (pp. 149-158); and Fruits (pp. 159-183). An appendix: Poisonous plants, is included. VJG

20

Concentration polarization in ultrafiltration of macromolecules. [Book]

Dejmek, P. 179 pp. (1975) [En] Lund, Sweden; Department of Food Science, Lund Institute of Technology [Dep. of Food Sci., Lund Univ., Lund, Sweden]

This thesis records fundamental studies on fouling of ultrafiltration (UF) membranes (distinguished from reverse osmosis) by concentration-polarization when used for large molecules (proteins, dextran). Experimental data are compared with mathematical concepts. A test UF apparatus included a 25 cm² cellulose acetate membrane (2 types) pressurized by compressed N₂. Flux measurements and measurements of concn. of the test solution and the permeate were made and relations were derived between macromolecular concn. in the polarization layer and transport of solvent at different pressures. Test materials included some of food interest: albumin (bovine/plasma), casein, β -lactoglobulin (whey) and egg white lysozyme. Hydraulic resistance is concluded to be a major factor in polarization, although not simple blockage of pore openings. Results support the theory of a boundary layer offering little resistance and a compressed 'gel' layer of constant composition responsible for the resistance, reaching a point where increased pressure merely increases gel accumulation with no

change of flux. Effects of temp., pH, various ions and fatty acids on in situ gel aggregation at the membrane are discussed. ELC

21

[Thermo-convective mass transfer of rheologically complex liquids.] Konvektivnyi teplomassoprenos reologicheskii slozhnykh zhidkostei. [Book] Shul'man, Z. P. 350pp. (1975) [117 ref. Ru] Moscow, USSR; Energiya Price 2.22r

22

People and food tomorrow. [Book] Hollingsworth, D.; Morse, E. (Editors) xii + 173pp. ISBN 0-85334-701-8 (1976) [many ref. En] Barking, Essex, UK; Applied Science Publishers Ltd. Price £10 [British Nutr. Foundation, London, UK]

This book contains 15 papers presented at the British Nutrition Foundation's conference on 'People and food tomorrow', held at Churchill College, Cambridge, 1-4 April 1976, and covers scientific, economic, political and social factors affecting food supplies in the last quarter of the 20th century. Papers are: Food quantity and quality, by J. M. Goldsmith (pp. 1-10, 22 ref.); Demographic determinants; the world and Britain, by W. Brass (pp. 13-19, 12 ref.); Food is not just for eating, by J. McKenzie (pp. 21-31, 5 ref.); Growing populations and rising aspirations, by C. Gopalan (pp. 33-43, 6 ref.); Protein and energy requirements of the UK as part of the world community, by R. G. Whitehead (pp. 47-56, 14 ref.); Some micronutrients that may be critical, by A. S. Truswell (pp. 57-70, 76 ref.); Future food and nutrition policy in Norway, by N. Eeg-Larsen & M. Eggen Ogrim (pp. 71-77); The People's Republic of China; agriculture and food provision, by K. L. Blaxter (pp. 79-86); Scientific progress in world food production, by H. C. Pereira (pp. 89-102, 5 ref.); Food from farm to table, by J. B. M. Coppock (pp. 103-113, 13 ref.); New food technologies and their role in the world, by A. T. James & D. W. Larbey (pp. 115-123); Future trends in the use of protein resources, by J. Mauron (pp. 125-139, 7 ref.); Families who cannot afford to feed themselves, by L. Joy (pp. 143-148); Problems of interdependence - is food a special case? by G. Houston (pp. 149-155, 2 ref.); and Physical limitations on the food supply, by N. W. Pirie (pp. 157-165, 17 ref.). AL

23

Biochemical analysis in crop science. [Book] Draper, S. R. ix + 130pp. ISBN 0-19-854128-7 (Casebound) & ISBN 0-19-854132-5 (Paperback) (1976) [many ref. En] Oxford, UK; Oxford University Press Price £5.50 (Casebound) & £2.75 (Paperback) [Dep. of Agric., Univ. of Aberdeen, UK]

This is an introductory textbook dealing with biochemical techniques in the study of crop plants, and is intended for undergraduates and research

workers. It deals with sampling, storage and extraction of plant material, separation methods, assay procedures, and individual components of plant tissue. AL

24

Proceedings of the 3rd International Biodegradation Symposium. Sessions IV, XIV. [Conference proceedings]

Sharpley, J. M.; Kaplan, A. M. (Editors) v + 523-649pp. ISBN 0-85334-706-9 (1976) [many ref. En] Barking, Essex, UK; Applied Science Publishers Ltd. Price £7.00 [Sharpley Lab. Inc., Fredericksburg, Virginia, USA]

This book contains Session IV (Biodegradation of agricultural products) and Session XIV (Postharvest deterioration and mycotoxins) of the 3rd International Biodegradation Symposium held at the University of Rhode Island (Kingston, USA). Papers presented at Session IV include: Biodeterioration of sweetwaters in sugar refining, by R. H. Tilbury, C. J. Orbell, J. W. Owen & M. Hutchinson (pp. 533-543, 13 ref.), which reports a microbiological survey of sweetwaters, the aim being to locate those parts in the refining process where microbial growth occurs, to isolate and identify the biodeteriogenic microorganisms, to quantify the losses incurred, and to devise acceptable control measures; Biodegradation of brewer's grains. I, by J. R. Edwards & R. N. Smith (pp. 545-551, 11 ref.), which reports studies of biodegradation by pure cultures of 6 mesophilic and 3 thermophilic fungi; and Biodegradation of brewers' grains. II, by R. N. Smith, D. E. Odell & J. R. Edwards (pp. 553-559, 12 ref.), which reports studies of biodegradation by fungi in dual and tandem cultures. Papers presented at Session XIV were: Chemical control of postharvest diseases [in agricultural products], by J. M. Ogawa, B. T. Manji & A. H. El-Behadli (pp. 561-575, 31 ref.); [continued in following abstr.]. JA

25

Proceedings of the 3rd International Biodegradation Symposium. Sessions IV, XIV. [Conference proceedings]

Sharpley, J. M.; Kaplan, A. M. (Editors) v + 523-649pp. ISBN 0-85334-706-9 (1976) [many ref. En] Barking, Essex, UK; Applied Science Publishers Ltd. Price £7.00 [Sharpley Lab. Inc., Fredericksburg, Virginia, USA]

[Continued from preceding abstr.] Nonchemical control of postharvest deterioration of fresh produce, by W. L. Smith, Jr. (pp. 577-587, 42 ref.); Nature and importance of mycotoxins in grains, by U. L. Diener, N. D. Davis & G. Morgan-Jones (pp. 589-605, 73 ref.); Mycotoxins other than aflatoxins, by C. W. Hesseltine (pp. 607-623, 68 ref.), e.g. penicillic acid, patulin, sterigmatocystin, Alternaria toxins, emetic and rejection factors, zearalenone, ochratoxin, citrinin, T-2 toxin; An evaluation of environmental factors and occurrence of aflatoxin in Virginia shelled peanuts: 1964 to 1968, by C. A. Sledd, T. Eadie, C. E. O'Rear & G.

C. Llewellyn (pp. 625-634, 23 ref.); Degradation of barley by *Aspergillus fumigatus* Fres., by P. N. Sellars, C. E. G. McGill & B. Flannigan (pp. 635-643, 15 ref.); and Microbial rot of cocoyam (*Xanthosoma sagittifolium* (L) Schott) in storage in Nigeria, by S. K. Ogundana (pp. 645-649, 11 ref.). A subject index is included. JA

26

Intermediate moisture foods. [Conference Proceedings]

Davies, R.; Birch, G. G.; Parker, K. J. **United Kingdom**, National College of Food Technology (Editors)

xii + 306pp. ISBN 0-85334-702-6 (1976) [many ref. En] Barking, Essex, UK; Applied Science Publishers Ltd. Price £15.00 [Nat. Coll. of Food Tech., Reading Univ., Weybridge, Surrey, UK]

This book contains 19 papers presented by international authorities at the industry-university cooperation symposium held at, and organized under the auspices of, the National College of Food Technology, Weybridge, covering the scientific and commercial bases of intermediate moisture foods (IMF) technology. Papers include: A place for IMF, by E. J. Rolfe (pp. 1-3); Some introductory thoughts on IMF, by J. N. Robson (pp. 32-42, 7 ref.); The significance of water, hydration and aqueous systems in IMF, by A. Suggett (pp. 66-74, 13 ref.); Measurement of water activity. Critical appraisal of methods, by T. M. Hardman (pp. 75-88, 35 ref.); The aqueous environment for chemical change in IMF, by R. B. Duckworth, J. Y. Allison & H. A. A. Clapperton (pp. 89-99, 6 ref.); Chemical and non-enzymic changes in IMF, by J. C. Williams (pp. 100-119, 44 ref.); Control of clostridia by water activity and related factors, by T. A. Roberts & J. L. Smart (pp. 203-214, 67 ref.); Microbiological specifications for IMF with special reference to methodology used for the assessment of compliance, by D. A. A. Mossel (pp. 248-259, 78 ref.); and Interactions of micro-organisms with the environment of IMF, by J. C. Measures & G. W. Gould (pp. 281-297, 47 ref.). A further 9 papers are abstracted separately and are in the author index under **United Kingdom**, National College of Food Technology [IMF Symposium]. AL

27

Food, man, and society. [Book]

Walcher, D. N.; Kretchmer, N.; Barnett, H. L. (Editors)

xv + 288pp. ISBN 0-306-30974-2 (1976) [many ref. En] New York, USA; Plenum Press Price \$27.00 [Pennsylvania State Univ., University Park, Pennsylvania, USA]

The papers contained in this book were presented at the 3rd meeting of the International Organization for the Study of Human Development, held in Madrid on Sept. 21-24, 1975. The interdisciplinary meeting dealt with nutrition as an integral part of human life as well as a fundamental biological discipline. Papers are: Nutrition and science, by A. Kornberg (pp. 1-11); Food and history, by L. White, Jr. (pp. 12-30, 24

ref.); Geographic perspectives on man's food quest, by F. J. Simoons (pp. 31-53, 46 ref.); Availability of food, by E. M. Ojala (pp. 54-68, 1 ref.); Clinical manifestations of malnutrition, by E. M. DeMaeyer (pp. 69-81, 14 ref.); Attacking the malnutrition problem, by J. E. Austin (pp. 82-99, 16 ref.); Food and socioeconomic development, by C. A. Canosa (pp. 100-112, 23 ref.); Ethical and cultural aspects in human food behavior implication in food planning, by J. Tremolieres & G. Petrizzelli (pp. 113-127, 3 ref.); Benefit-risk decision making and food safety, by W. J. Darby (pp. 128-149, 10 ref.); Food, tradition, and prestige, by I. L. de Garine (pp. 150-173, 20 ref.); Food faddisms, by F. J. Stare (pp. 174-185); Teaching aspects: education and training in nutrition, by H. D. Cremer (pp. 186-204, 10 ref.); [continued in following abstr.] AL

28

Food, man, and society. [Book]

Walcher, D. N.; Kretchmer, N.; Barnett, H. L. (Editors)

xv + 288pp. ISBN 0-306-30974-2 (1976) [many ref. En] New York, USA; Plenum Press Price \$27.00 [Pennsylvania State Univ., University Park, Pennsylvania, USA]

[Continued from preceding abstr.] Food and health: considerations of the protein metabolism with special reference to amino acid requirements and imbalance, by H. E. Aebi (pp. 205-228, 51 ref.); Food and genetic development, by J. Frezal (pp. 229-243, 22 ref.); Food and physiological development, by H. Papousek (pp. 244-254, 8 ref.); Food and human brain development, by J. Dobbing (pp. 255-264, 6 ref.); Nutrition and development, by E. Rossi & N. Herschkowitz (pp. 265-276, 18 ref.); and Biochemical development and nutrition of the newborn, by N. C. R. Raiha (pp. 277-284, 16 ref.). AL

29

Food emulsions. [Book]

Friberg, S. (Editor)

ix + 480pp. ISBN 0-8247-6337-8 (1976) [many ref. En] New York, USA; Marcel Dekker Inc. Price FS165.00 [Swedish Inst. for Surface Chem., Stockholm, Sweden]

This book, Volume 5 in the series 'Food Science, a Series of Monographs', produced under the general editorship of O. R. Fennema [see preceding abstr. for Part I of Volume 4] contains the following chapters: Emulsion stability, by S. Friberg (pp. 1-37, 76 ref.); Crystal and liquid crystal structures of lipids, by K. Larsson (pp. 39-66, 35 ref.); Food emulsifiers and their association with water, by N. Krog & J. B. Lauridsen (pp. 67-139, 115 ref.); Ice cream, by K. G. Berger (pp. 141-213, 100 ref.); Cake emulsions, by I. S. Shepherd & R. W. Yoell (pp. 215-275, 49 ref.); On the association of lipids and proteins, by R. P. Rand (pp. 277-294, 26 ref.); Milk and milk products, by E. Graf & H. Bauer (pp. 295-383, 154 ref.); and Meat emulsions, by J. Schut (pp. 385-458, 147 ref.). Author and subject indexes are included. JA

30

Handbook of moisture determination and control. Principles, techniques, applications. Vol. 3. [Book] Pande, A.

xi + pp. 585-873 ISBN 0-8247-6186-3 (1975) [many ref. En] New York, USA; Marcel Dekker Inc. [Shriram Inst. for Ind. Res., Delhi, India]

This book, the 3rd volume in a 4-volume series, discusses the application of various moisture detn. and control methods and techniques to a variety of products. Consideration is also given to theoretical and practical aspects of the phenomenon of moisture sorption in these products. Chapters are: Moisture in textiles (pp. 584-656, 147 ref.); Moisture in bagasse, wood, and paper (pp. 657-715, 56 ref.); Moisture in foods and allied agricultural products (pp. 717-787, 132 ref.), the products covered being cereal grains, flour and flour products, sugar and sugar products, dried fruits, dehydrated foods (e.g. vegetables), milk products, beverages (tea, coffee, cocoa), condiments, spices and tobacco; and Moisture in soils, sands, concrete, and silica and silicates (pp. 789-873, 102 ref.). JA

31

Rodent damage to growing crops and to farm and village storage in tropical and subtropical regions. [Book]

Hopf, H. S.; Morley, G. E. J.; Humphries, J. R. O. (Editors) vi + 115pp. ISBN 0-85954-053-7 (1976) [319 ref. En] College House, Wrights Lane, London, UK; Cent. for Overseas Pest Res. & 56-62 Grays Inn Rd, London, UK; Tropical Products Inst. Price £4.70

A large-scale postal survey was conducted in 1972-1973, under the auspices of the Centre for Overseas Pest Research and The Tropical Products Institute, into rodent damage to growing and stored crops. Part I, pp. 3-60 is entitled "Rodent damage to growing crops" and Part II, pp. 61-87, "Rodent damage to farm and village storage". Results from > 100 replies are tabulated by country, type of storage commodities attacked, rodent species reported, extent of damage and control methods. Types of storage ranged from mud bins and grass baskets to terminal silo installations, commodities attacked from cereals to processed and cooked foods. Little factual information was available on the extent of damage. The main control methods were poison baiting, fumigation rodent proofing, trapping and hunting. No information is provided on residues or other effects on the food commodities. Appendices give details of the questionnaire used, a list of rodent spp. mentioned, a guide to the regional classification used, and contributors, of completed questionnaires (by region) and their organization. RM

32

Staphylococci and their significance in foods. [Book]

Minor, T. E.; Marth, E. H. xiv + 297pp. ISBN 0-444-41339-1 (1976) [many

ref. En] Amsterdam, Netherlands; Elsevier Scientific Publishing Co. Price \$35.50; F87.00 [Dep. of Preventive Med., Univ. of Wisconsin Cent. for Health Sci. Madison, Wisconsin 53706, USA]

This book reviews relevant literature and deals specifically with characteristics of *Staph. aureus* and its enterotoxins, behaviour of staphylococci in foods, and epidemiology and control of staphylococcal intoxications. Chapters are: Some historical aspects of staphylococcal infections, intoxications, and classification (pp. 1-12, 54 ref.); Taxonomy and general description of the staphylococci (pp. 13-30, 81 ref.); Resistance of staphylococci to biological, and chemical agents in artificial environments (pp. 31-51, 56 ref.); Physiological characteristics suggested as indices of staphylococcal enterotoxigenicity (pp. 53-77, many ref.); Isolation and identification of staphylococci (pp. 79-98, 56 ref.); The staphylococcal enterotoxins: historical perspectives, description and properties, synthesis, and purification (pp. 99-125, 100 ref.); Analysis of staphylococcal enterotoxins in artificial media and in foods (pp. 127-157, 87 ref.); Pathogenesis and mode of action of the staphylococcal enterotoxins (pp. 159-174, 50 ref.); Source and transmission of enterotoxigenic staphylococci (pp. 175-194, 101 ref.); Behavior of staphylococci in dairy foods (pp. 195-217, 51 ref.); Behavior of staphylococci in meat, fish, and poultry products (pp. 219-234, 63 ref.); Behavior of staphylococci in cream-filled pastries and delicatessen foods (pp. 235-250, 40 ref.); Surveillance of staphylococcal food-borne intoxications (pp. 251-271, 14 ref.); and Control of staphylococcal food-borne intoxications (pp. 273-290, 8 ref.). JA

33

The truth about fiber in your food. [Book] Galton, L.

x + 246pp. ISBN 0-517-52504-6 (1976) [76 ref. En] New York, USA: Crown Publishers, Inc. Price £6.45

The story of the work of Denis Burkitt, a British surgeon, and his colleagues in their search to explain the many severe effects of omitting fibre from the diet and the remarkable health benefits when fibre is restored to the diet is told in the style of a detective novel. But restoration of dietary fibre is not just a matter of adding bran to the diet, although bran is now regarded (perhaps wrongly) as the new panacea. Research indicates that fibre should be retained in its natural form, as unrefined carbohydrates, cereal fibre and vegetable fibre. The calorie and fibre contents of numerous foods are tabulated (pp. 147-167) and high fibre recipes, prepared for this book by the Dietetics Department of Bristol Royal Infirmary, are given (pp. 169-230). AL

34

Immunological aspects of foods. [Book] Catsimpoalas, N. (Editor)

viii + 400pp. ISBN 0-87055-203-1 (1977) [many ref. En] Westport, Connecticut, USA; AVI

Publishing Company, Inc. Price \$34.00 (US) \$35.00 (Foreign) [Biophysics Lab., Massachusetts Inst. of Tech., Cambridge, Massachusetts, USA]

This book is an introduction to the use of modern immunological methods in the study of food materials and food-borne contaminants and their effects on the immune system of man. It is divided into 4 sections: Food proteins (pp. 1-169); Toxic plant and animal constituents (pp. 170-198); Bacterial and viral toxins (pp. 199-278); and Food allergy and nutritional immunology (pp. 279-387). Individual chapters are: Immunochemical aspects of meat proteins, by R. G. Cassens, M. L. Greaser & A. R. Hayden (pp. 1-36, many ref.); Immunological properties of soybean proteins, by N. Catsimpoilas (pp. 37-59, 55 ref.); Immunochemistry of barley seed proteins, by J. Daussant (pp. 60-86, 81 ref.); Immunochemistry of wheat proteins, by J. A. D. Ewart (pp. 87-116, 65 ref.); Immunochemistry of peanut proteins: characterization, physiology, and denaturation, by N. J. Neucere (pp. 117-151, 85 ref.); Immunochemistry of avian egg white proteins, by H. T. Miller (pp. 152-169, 49 ref.); Immunology of plant agglutinins, by W. G. Jaffe (pp. 170-181, 79 ref.); Immunology of plant proteinase inhibitors, by C. A. Ryan (pp. 182-198, 45 ref.); Immunological aspects of staphylococcal enterotoxins, by M. S. Bergdoll (pp. 199-220, 79 ref.); Immunology of the enterotoxins from *Escherichia coli*, by T. M. Jacks (pp. 221-232, 33 ref.); [continued in following abstr.] AL

35

Immunological aspects of foods. [Book] Catsimpoilas, N. (Editor) viii + 400pp. ISBN 0-87055-203-1 (1977) [many ref. En] Westport, Connecticut, USA; AVI Publishing Company, Inc. Price \$34.00 (US) \$35.00 (Foreign) [Biophysics Lab., Massachusetts Inst. of Tech., Cambridge, Massachusetts, USA]

[Continued from preceding abstr.] *Clostridium botulinum* and *Clostridium perfringens*, by C. E. Kimble (pp. 233-259, many ref.); Immunological aspects of fish and shellfish poisons, by E. J. Schantz (pp. 260-266, 19 ref.); Immunology of food-borne viruses, by W. W. Yotis (pp. 267-278, 54 ref.); Food allergens, by F. Perlman (pp. 279-316, 84 ref.); Oilseed allergens, by J. R. Spies (pp. 317-371, 70 ref.); and Malnutrition and immunity, by H. McFarlane & M. R. C. Path (pp. 372-387, 71 ref.). AL

36

Gas chromatography in food analysis. [Book] Dickes, G. J.; Nicholas, P. V. 393pp. ISBN 0-408-70781-X (1976) [many ref. En] London, UK; Butterworth & Co. (Publishers) Ltd. Price £16.00 [Scientific Adviser's Dep., Avon County Council, Avon, UK]

This book covers those aspects of gas chromatography of relevance to food analysis and also covers allied techniques and sample extraction and preparation. It is anticipated that readers have a

working knowledge of gas chromatography. The book contains 5 parts: Practical aspects of gas chromatography (pp. 1-99); Recommendations (pp. 101-134); Food composition (pp. 135-275); Food additives (pp. 277-318); and Food contaminants (pp. 319-370), each part containing > 1 chapter. Chapters are: The apparatus (pp. 3-12, 28 ref.); Columns (pp. 13-42, 136 ref.); Detectors (pp. 43-60, 71 ref.); Sampling and sample derivatisation (pp. 61-77, 138 ref.); Reaction chromatography (pp. 78-86, 60 ref.); Interpretation of results (pp. 87-92, 19 ref.); Other identification and related techniques (pp. 93-99, 71 ref.); Recommended methods and stationary phases (pp. 103-134, 120 ref.); Dairy products (pp. 137-153, 77 ref.); Fats and oils (pp. 154-176, 119 ref.); Meat, fish and eggs (pp. 177-191, 53 ref.); Essential oils (pp. 192-208, 85 ref.); Fruits, vegetables and non-alcoholic beverages (pp. 209-233, 122 ref.); Alcoholic beverages and vinegar (pp. 234-254, 133 ref.); Sugar products and syrups (pp. 255-264, 37 ref.); Cereals and their products (pp. 265-275, 29 ref.); Preservatives and antioxidants (pp. 279-294, 66 ref.); Emulsifiers and stabilisers (pp. 295-304, 22 ref.); [continued in following abstr.]; JA

37

Gas chromatography in food analysis. [Book] Dickes, G. J.; Nicholas, P. V. 393pp. ISBN 0-408-70781-X (1976) [many ref. En] London, UK; Butterworth & Co. (Publishers) Ltd. Price £16.00 [Scientific Adviser's Dep., Avon County Council, Avon, UK]

[Continued from preceding abstr.] Other food additives (pp. 305-318, 33 ref.); Pesticides (pp. 321-346, 165 ref.); and Other food contaminants (pp. 347-370, 79 ref.). 3 appendices are included: Some gas chromatography liquid stationary phases and equivalents (pp. 373-374); Some gas chromatography support materials and equivalents (p. 375); and Common names of fatty acids and their carbon numbers (pp. 376-377). A subject index is included. JA

38

Energy and food production. [Book] Leach, G.

137pp. ISBN 0-902852-55-8 (1976) [137 ref. En] Guildford, Surrey, UK; IPC Science and Technology Press Ltd. Price £5.50

The book provides information on the enormous range of energy inputs to produce different kinds of food by a range of methods from subsistence farming to synthetic protein production, it investigates relationships between energy, land and labour use, it exposes the huge amounts of energy used to transport, package, sell, cook, store and process foodstuffs, and points out opportunities for conserving fuels. Chapters deal with pre- and semi-industrial farming, transition to full-industrialization in UK, changes within full-industrialization in UK 1952-1972, food production from farm to shop in UK in 1968, and response and challenge. Appendices include: UK food

production industries 1968, energy analysis conventions and methods, fuels and power, goods and services, price changes, crop drying, minor inputs, and transport. Energy budgets are given for UK whole farms, UK crops and livestock, pre- and semi-industrial systems, fully-industrial systems, fisheries, and protein from fuel feedstocks. AL

39

The main food groups in Great Britain. Les principaux groupes de l'industrie alimentaire Anglaise. [Book]

France, Association pour la Promotion Industrie-Agriculture; France, Centre Francais du Commerce Extérieur

379pp. (1974) [En, Fr] Paris, France (London, UK: Food Trade Press) Price £51.00

This work is a follow-up of the successful APRIA publications 'The concentration within the food industry in the countries of the EEC and Great Britain (1968)' and 'Groups within the French food industry' (1972). After a brief report (in En & Fr) 'The British food industry', by G. Lombard, it gives a detailed breakdown of the 44 major British food groups, covering name and address of present company, amount of share capital, composition of board of directors, brand names of major food products, share of home market, production potential, factory sites, number of employees, and synoptic table of companies within the group. Alphabetical lists of all companies and brand names mentioned are appended. [See also following abstr.] HBr

40

The main food groups in Denmark. Les principaux groupes de l'industrie alimentaire Danoise. [Book] France, Association pour la Promotion Industrie-Agriculture; France, Centre Francais du Commerce Extérieur

117pp. (1974) [En, Fr] Paris, France (London, UK: Food Trade Press) Price £29.00

After a brief report (in En & Fr) 'The Danish food industry', by G. Lahoussaye, this work gives a detailed breakdown of the 16 major Danish food groups. The format is similar to that for the British food industry. [See preceding abstr.] HBr

41

Atomic absorption spectroscopy. [Book] Welz, B.

xii + 267pp. (1976) [many ref. En] Weinheim, Federal Republic of Germany; Verlag Chemie Price DM68.00

This book is an English translation of the 2nd edition (1975) of the comprehensive book published in German under the title Atom-Absorptions-Spektroskopie (1st edition 1972). It contains an introductory chapter on physical-spectroscopical principles (pp. 1-15); 4 chapters on instrumentation, dealing with light sources (pp. 17-26), atomization in and without flames (pp. 27-68),

optics (pp. 69-77), and electronics and readout (pp. 79-88); Technique (pp. 89-124); Related analytical methods (pp. 125-132); short sections on individual elements (pp. 133-181); Specific applications (pp. 183-224) including agricultural and foodstuffs chemistry (pp. 194-198), water and air (pp. 198-202) and glass and ceramics (pp. 219-220); and a bibliography of 1388 ref. (pp. 225-252). AL

42

Earth foods. [Book]

Fryer, L.; Simmons, D.

viii + 180pp. ISBN 0-695-80311-5 (1972) [En] Chicago, USA; Follet Publishing Company Price \$5.95

This book is one of the growing number of publications written as a protest against what the authors regard as the chemical orientation of existing farming and food processing practices, and advocating a return to 'natural techniques'. Chapters include: Our food revolution (pp. 1-12); The web of life (pp. 13-21); Organic foods (pp. 22-36); A carrot is a carrot is a carrot or is it? (pp. 37-54); Growing earth foods (pp. 55-74); The gustatory values of foods (pp. 75-84); Financial and business arrangements (pp. 85-109); Making earth foods (pp. 110-123); Earth kitchens (pp. 124-130); Earth food cooking (pp. 131-157); and Putting it all together in a good food community (pp. 158-180). HBr

43

Proceeding of the 3rd International Biodegradation Symposium. [Conference Proceedings]

Sharpley, J. M.; Kaplan, A. M. (Editors)

xiv + 1138pp. ISBN 0-85334-679-8 (1976) [many ref. En] Barking, Essex, UK; Applied Science Publishers Ltd. [Sharpley Lab. Inc., Fredricksburg, Virginia, USA]

This book includes Session XV (Immobilized enzymes for degradation), (pp. 995-1033), of the 3rd International Biodegradation Symposium held at the University of Rhode Island (Kingston, USA). Papers presented at Session XV include: Future prospects for immobilized enzymes in biodegradation, by R. D. Falh (pp. 995-999, 9 ref.); Characteristics of immobilized lipase, by P. Melius, W. J. Brown & B. C. Wang (pp. 1013-1020, 13 ref.); Continuous production of glucose from starch hydrolysates by immobilized glucoamylase (pp. 1021-1032, 11 ref.); and Preparation and application of immobilized lactases, by M. V. Wondolowski (pp. 1033-1041, 40 ref.). [See also FSTA (1977) 9 5C232 & 233.] HBr

44

The science of food. An introduction to food science, nutrition and microbiology. [Book]

Gaman, P. M.; Sherrington, K. B.

xi + 300pp. ISBN 0-08-019948-8 (Hardcover), ISBN 0-08-019947-X (Flexicover) (1977) [En]

Oxford, UK; Pergamon Press Ltd. Price £8.25 (Hardcover), £4.95 (Flexicover)

This book is intended for use at an intermediate level by students with little prior scientific knowledge. It contains the following chapters: Measurement and metrication (pp. 1-9); Basic chemistry (pp. 10-33); Organic chemistry (pp. 34-51); Solutions and colloids (pp. 52-60); Carbohydrates (pp. 61-75); Fats (pp. 76-89); Proteins (pp. 90-109); Vitamins (pp. 110-134); Mineral elements and water (pp. 135-151); Basic physiology (pp. 152-168); Enzymes and digestion (pp. 169-178); Food and energy (pp. 179-188); Commodities (pp. 189-215); An introduction to microbiology (pp. 216-243); Food poisoning and its prevention (pp. 244-270); and Food spoilage and food preservation (pp. 271-284). 2 appendices are included, on the % contribution of different foods to the nutrient content of the average household diet, and the recommended daily intakes of energy and nutrients for the UK. A 1-p. guide to further reading and a 10-pp. index are also included. DIH

45

Wastage in the UK food system. [Book]

Roy, R.

42pp. (1976) [65 ref. En] London, UK; Earth Resources Research Ltd. Price £0.75 [40 James Street, London W1, UK]

The flow of food through the system from farm and dockside to the consumer is examined, and at each stage in the system the author shows what proportion of food goes forward to eventual consumption and what is 'lost' or diverted to other uses. Sources of food wastage (which are estimated at about 21-25%) examined are: wastage in production (yield loss, harvesting and farm wastage, wastage in processing and distribution (losses in storage and transport, wastage in processing and marketing), and wastage in consumption (food preparation, losses in cooking, and kitchen and plate waste). 2 main ways of reducing wastage, i.e. prevention at source and utilization of wastes, are discussed. Appendices give wastage budgets for white bread, potatoes, frozen fish and canned carrots in the UK; a table gives estimates of % wastage of various foods in the USA during World War II. AL

46

Food production and consumption. [Book]

Duckham, A. N.; Jones, J. G. W.; Roberts, E. H. (Editors)

xx + 541pp. ISBN 0-7204-0396-0 (North-Holland) & ISBN 0-444-11042-9 (Elsevier) (1976) [many ref. En] Amsterdam, Holland; North-Holland Publishing Co., & New York, USA; American Elsevier Publishing Co. Inc. Price \$48.95; £120.00 [Dep. of Agric. & Hort., Univ. of Reading, Berks., UK]

This book, subtitled 'The efficiency of human food chains and nutrient cycles', contains chapters contributed by specialists in many disciplines. It

provides scientific and social foundations for efficient food production and consumption strategies and their administration at national or international level. Chapters are: Introduction: the function and efficiency of human food chains, by A. N. Duckham, J. G. W. Jones & E. H. Roberts (pp. 3-11, 4 ref.); Word picture - present and future, by W. H. Pawley (pp. 13-24, 7 ref.); Flows and cycles of natural resources, by J. Elston & R. W. Snaydon (pp. 27-41, 26 ref.); Flows, cycles and yields in agricultural ecosystems, by R. W. Snaydon & J. Elston (pp. 43-60, 62 ref.); Environmental constraints, by A. N. Duckham (pp. 61-81, 64 ref.); The efficiency of photosynthesis: the hierarchy of cell, leaf and crop canopy, by E. H. Roberts (pp. 85-105, 23 ref.); Photosynthetic efficiency of the whole plant, by J. P. Cooper (pp. 107-126, 77 ref.); The efficiency of solar energy conversion by the whole crop, by R. H. Holliday (pp. 127-146, 35 ref.); The efficiency of protein production by crop plants, by S. B. Heath (pp. 147-169, 89 ref.); The efficiency of conversion of feed energy and protein into animal products, by C. C. Balch & J. T. Reid (pp. 171-198, 40 ref.); The food production efficiency of undomesticated species of animals, by R. V. Large (pp. 199-214, 41 ref.); [continued in following abstr.] AL

47

Food production and consumption. [Book]

Duckham, A. N.; Jones, J. G. W.; Roberts, E. H. (Editors)

xx + 541pp. ISBN 0-7204-0396-0 (North-Holland) & ISBN 0-444-11042-9 (Elsevier) (1976) [many ref. En] Amsterdam, Holland; North-Holland Publishing Co., & New York, USA; American Elsevier Publishing Co. Inc. Price \$48.95; £120.00 [Dep. of Agric. & Hort., Univ. of Reading, Berks., UK]

[Continued from preceding abstr.] The efficiency of technological systems of food production, by J. T. Worgan (pp. 215-229, 41 ref.); Food preservation, preparation and storage, by A. G. Ward (pp. 231-252, 21 ref.); Inorganic nutrients and vitamins, by D. P. Cuthbertson (pp. 253-270, 34 ref.); Household consumption and human nutrition, by A. Copping (pp. 271-287, 51 ref.); Agricultural bio-degradation and soil biology, by N. Walker (pp. 289-298, 38 ref.); Farm wastes: straw and other fibrous materials, by E. Owen (pp. 299-318, 72 ref.); Farm wastes: animal, excreta, by J. A. C. Gibb & V. C. Nielsen (pp. 319-329, 13 ref.); Environmental pollutants of agriculture: crops and grasses, by W. Dermott (pp. 331-335, 13 ref.); Environmental pollutants of agriculture: livestock, by H. D. Kay (pp. 337-346, 32 ref.); Food chain contaminants and human health, by P. S. Elias & A. E. Martin (pp. 347-359, 34 ref.); The disposal of sewage and other industrial wastes, by R. C. Denney (pp. 361-370, 34 ref.); Industrial energy in human food chains, by G. Leach (pp. 371-382, 13

ref.); The use of models in systems research, by P. J. Charlton (pp. 385-404, 13 ref.); Planning and control of farming systems, by F. M. Anderson & J. B. Dent (pp. 405-416, 44 ref.); Food marketing systems in developed and developing countries, by F. Ellis (pp. 417-429, 18 ref.); [continued in following abstr.] AL

48

Food production and consumption. [Book]
Duckham, A. N.; Jones, J. G. W.; Roberts, E. H. (Editors)
xx + 541pp. ISBN 0-7204-0396-0 (North-Holland) & ISBN 0-444-11042-9 (Elsevier) (1976)
[many ref. En] Amsterdam, Holland; North-Holland Publishing Co., & New York, USA; American Elsevier Publishing Co. Inc. Price \$48.95; f120.00 [Dep. of Agric. & Hort., Univ. of Reading, Berks., UK]

[Continued from preceding abstr.] The inducement and administration of change: principles, by G. L. Johnson (pp. 431-440, 28 ref.); The inducement and administration of change: practice, by A. N. Duckham (pp. 441-457, 47 ref.); An approach to the planning and administration of human food chains and nutrient cycles, by A. N. Duckham, J. G. W. Jones & E. H. Roberts (pp. 461-517, 55 ref.); A 9-pp. subject index is included. AL

49

[Food industry engineering. Fundamental aspects.]
Genie industrielle alimentaire. Aspects fondamentaux. [Book]
Loncin, M.
xiv + 286pp. ISBN 2-225-45364-0 (1976) [Fr]
Paris, France; Masson; Price 120F.

This detailed textbook of food industry engineering includes the following chapters: Operations in the food industry (pp. 3-10); Measurements, dimensions and units (pp. 11-12); Equations relating to transfer of material, heat and movement (pp. 13-41); Resolution of transfer equations (pp. 42-73); Determination of transfer coefficients (pp. 74-135); Phase equilibria (pp. 136-155); Development of rate factors (pp. 156-179); Applied biochemical kinetics (pp. 180-223); and A selection of problems and their solutions is given (pp. 224-250). A 19-pp. bibliography is given, together with a 4-pp. subject index, and 13 pp. of tables of physical data for materials of importance in the food industry. AJDW

50

[Potential changes in the field of intermediary food products.] Le potentiel innovation au niveau des produits alimentaires intermediaires P.A.I. [Book]
France, Ministere de l'Agriculture et du Developpement Rural; France, Societe pour l'Etude et le Developpement de l'Industrie de l'Agriculture et du Commerce; France, Association pour la Promotion Industrie-Agriculture
185pp. (1974) [Fr] Paris, France (London, UK; Food Trade Press)

Intermediary food products (IFP) are defined as a product which has been processed to a greater or lesser degree and intended for further processing by the food industry. These products can be of agricultural, biological or synthetic origin. The subject is covered in the following chapters: IFP in France (pp. 7-77, which gives a classification of IFP); Requirements of users of IFP (pp. 78-122); IFP in other countries (pp. 123-159); and Creative thinking and IFP. An appendix gives the text of a circular dated Oct. 3, 1963, issued by the French Public Health Authorities on the subject of chemical compounds intended for use in foods. HBr

51

[Preservation and storage of foods in the home.]
Konzervace a ukládání potravin v domácnosti. [Book]
Puhony, K.
263pp. (1976) [22 ref. Cs] Prague, Czechoslovakia; Statni zemedelske nakladatelstvi. Price 20Kcs

The book includes the following chapters: Factors affecting food deterioration (pp. 6-9); Processing and storage of fruit and vegetables (pp. 9-16); Preservation methods (pp. 16-23); Suitability of individual fruits and vegetables for preservation (pp. 23-35); Some preservatives (pp. 35-38); Compotes (pp. 38-75); Jams, purees and fruit jellies (pp. 75-107); Fruit cheeses, pastes and butters (pp. 107-110); Semimanufactured fruit products (pp. 110-112); Vegetable purees and ketchup (pp. 112-116); Fruit musts (pp. 116-135); Fruit syrups (pp. 135-137); Fruit and grape wines (pp. 137-172); Musts containing alcohol (pp. 181-183); Fruit liqueurs (pp. 183-185); Fruit and vegetable drying (pp. 188-201); Refrigeration (pp. 201-207); Vegetable preservation by sterilization, lactic fermentation and chemical means, and preservation of individual vegetable var. (pp. 207-220); Preservation of mushrooms (pp. 220-225); Meat preservation (pp. 225-240); and Fresh fruit and vegetables storage (pp. 240-247). STI

52

The supermarket trap. [Book]
Cross, J.
xii + 306pp. ISBN 0-253-20199-3 (Paperback) & ISBN 0-253-35582-6 (Cloth) (1976) [many ref. En] London, UK; Indiana Univ. Press Price £2.65 (Paperback) & £10.05 (Cloth)

This is a revised and enlarged edition of the 1970 book, written primarily to tell consumers more about food industry operations, particularly the supermarket, and getting value for money. Chapter headings are: The day the cash registers rang 'no sale' (pp. 1-13); The rise of the food industry giants (pp. 14-26); The high cost of advertising (pp. 27-42); The supermarket casino (pp. 43-61); The shopping maze (pp. 62-80); The truth about packaging (pp. 81-96); The supermarket underworld (pp. 97-117); Shopping problems of the poor (pp. 118-129); The worm in the apple (pp.

130-150); The supermarket money game (pp. 151-165); The profit game (pp. 166-182); A new breed of shopper (pp. 183-201); and The food industry in the year 2000 (pp. 202-223). Appendices deal with: facts behind the 1968-75 price increases; the rise of the food giants; who's who among the food giants; chain store expenses; advertising by some of the food giants; food store margins; promotions; packaging costs; monitoring additives, agricultural chemicals, and fallout; shopping supplement; and some foods and processes of the future. AL

53

Food colloids. [Book]

Graham, H. D. (Editor)

xi + 588pp. ISBN 0-87055-201-5 (1977) [many ref. En] Westport, Connecticut, USA; AVI Publishing Company, Inc. Price \$29.00 (US) \$30.00 (Foreign) [Dep. of Chem. Univ. of Puerto Rico, Mayaguez, Puerto Rico]

This volume presents a general view of those substances which occur naturally in, or are added to, foods and which when added to water exhibit the classical phenomena of colloids, i.e. dispersibility and the Tyndall effect. The book is intended for 4th yr students in chemistry, biology and food science and technology, as well as undergraduates, and as a reference book. Chapters are: Chemistry of colloid substances: general principles, by R. McL. Whitney (pp. 1-65, 72 ref.); Milk proteins, by R. McL. Whitney (pp. 66-151, 321 ref.); Concentrated seed proteins, by F. Sosulski (pp. 152-206, 118 ref.); Egg proteins, by W. J. Stadelman (pp. 207-239, 222 ref.); Meat proteins, by H. W. Ockerman (pp. 240-291, 156 ref.); Fish proteins, by A. F. Novak, R. M. Rao & D. A. Smith (pp. 292-319, 96 ref.); Interaction of sulfated polysaccharides with proteins, by C. F. Lin (pp. 320-346, 26 ref.); Sulfated seaweed polysaccharides, by A. A. Moirano (pp. 347-381, 19 ref.); Cellulose hydrocolloids, by A. J. Ganz (pp. 382-417, 45 ref.); Commercially important pectic substances, by D. B. Nelson, C. J. B. Smit & R. R. Wiles (pp. 418-437, 51 ref.); Algin, by I. W. Cottrell & P. Kovacs (pp. 438-463, 112 ref.); Starch and its modifications for the food industry, by E. Heckman (pp. 464-499, 28 ref.); Xanthan gum, by P. Kovacs & K. S. Kang (pp. 500-521, 89 ref.); Plant hydrocolloids, by W. A. Meer (pp. 522-539, 56 ref.); and Analytical methods for major plant hydrocolloids, by H. D. Graham (pp. 540-579, 28 ref.). An 8-pp. index is included. AL

54

[Research projects in agriculture, nutrition, forestry, the timber industry and veterinary medicine, 1975/76. III. Nutritional sciences.] Forschungsvorhaben im Bereich der Landbau-, Ernährungs-, Forst- und Holzwirtschaftswissenschaften sowie der Veterinärmedizin. 1975/76. Teil III. [Book] Germany. Federal Republic of, Zentralstelle für Agrardokumentation und -information

v + 240pp. (Undated) [De] Bonn, Federal Republic of Germany; Bundesministerium für Ernährung, Landwirtschaft und Forsten

This is a list of 886 food science research projects in progress during 1975-1976 at 165 research institutes and departments in the Federal Republic of Germany. The material is divided into Nutritional physiology and chemistry (pp. 1-17), Food chemistry (pp. 18-70), Food technology (pp. 1-17), Food chemistry (pp. 18-70), Food technology (pp. 71-149), Food microbiology and hygiene (pp. 150-187) and Miscellaneous (pp. 188-189). There is an author index (pp. 191-197) and a detailed subject index (pp. 199-240). [See FSTA (1975) 7 10A578 for 1973 compilation.] HBr

55

Crop production. Principles and practices. [Book] Chapman, S. R.; Carter, L. P.

viii + 566pp. ISBN 0-7167-0581-8 (1976) [many ref. En] San Francisco, USA; W. H. Freeman & Co. Price £10.40 [Montana State Univ., Montana, USA]

This book covers more material than would normally be covered in a single course of plant science or crop production, and can readily be adapted to meet the needs of different groups of students. It is divided into 3 parts: Principles (pp. 3-93); Plants and their environment (pp. 95-211); and Production practices (pp. 213-537). Part 3 consists of discussions of actual production practices, in terms of plant biology for the major American and Canadian field crops. Separate chapters cover single or closely related crops and consider the following aspects: origin and history of culture; botanical characteristics; environmental requirements; production practices (including harvesting and storage); diseases and pests; and crop utilization. Chapters included are: Plant science and human welfare (pp. 3-15, 4 ref.); Cell structure and function (pp. 15-38, 5 ref.); Vegetative growth and development (pp. 39-62, 4 ref.); Reproductive growth and development (pp. 63-85, 4 ref.); Plant classification and nomenclature (pp. 86-93, 3 ref.); Soils and crop production (pp. 97-121, 4 ref.); Moisture and crop growth (pp. 122-145, 3 ref.); Light and temperature (pp. 146-163, 4 ref.); Insects, diseases, and weeds (pp. 164-193, 9 ref.); Cropping systems and resource conservation (pp. 194-211, 3 ref.); Marketing crop products (pp. 215-226, 4 ref.); Seeds and seeding (pp. 227-246, 4 ref.); [Continued in following abstr.] VJG

56

Crop production. Principles and practices. [Book] Chapman, S. R.; Carter, L. P.

viii + 566pp. ISBN 0-7167-0581-8 (1976) [many ref. En] San Francisco, USA; W. H. Freeman & Co. Price £10.40 [Montana State Univ., Montana, USA]

[Continued from preceding abstr.] Cereals and man (pp. 247-257, 3 ref.); Corn and sorghum (pp. 259-279, 3 ref.); Rice (pp. 281-289, 4 ref.); Wheat (pp. 291-309, 3 ref.); Barley (pp. 311-323, 6 ref.);

Oats and rye (pp. 325-335, 3 ref.); Edible legumes and man (pp. 337-343, 3 ref.); Soybeans (pp. 345-357, 4 ref.); Peanuts (pp. 359-369, 5 ref.); Field beans and peas (pp. 371-381, 5 ref.); Cotton (pp. 383-395, 5 ref.); Tobacco (pp. 397-409, 3 ref.); Sugar beets and sugarcane (pp. 411-429, 4 ref.); Potatoes (pp. 431-441, 4 ref.); Safflower, rapeseed, flax, and sunflower for oil (pp. 443-461, 6 ref.); Forages and man (pp. 463-469, 3 ref.); Forage legumes (pp. 470-492, 4 ref.); Forage grasses (pp. 493-507, 4 ref.); Forage management and utilization (pp. 508-522, 6 ref.); and Progress through research (pp. 523-537, 2 ref.). A 19-pp. glossary of terms is included. VJG

57

Braverman's introduction to the biochemistry of foods. [Book]

Berk, Z.

Ed. 2, xii + 315pp. ISBN 0-444-41450-9 (1976) [many ref. En] Amsterdam, Netherlands; Elsevier Scientific Publishing Co. Price \$20.25; f49.50 [Dep. of Food Eng. & Biotech., Technion-Israel Inst. of Tech., Haifa, Israel]

This revised edition of 'Introduction to the biochemistry of foods', by J. B. S. Braverman (1962), is designed to provide food science or technology students at the undergraduate level, with a general textbook of a comprehensive nature concerned specifically with food biochemistry. Equal emphasis is given to the definition of foods as chemical systems and to the description of biochemical processes of importance in foods. Extensive reference to original research papers is omitted, thus providing a readability and continuity considered essential for an introductory text of this type. Chapters included are: Introduction (pp. 1-4, 8 ref.); Protein, in general (pp. 5-25, 7 ref.); Enzymes (pp. 27-41, 8 ref.); Enzyme kinetics (pp. 43-59, 4 ref.); Protein systems in foods (pp. 61-78, 12 ref.); Carbohydrates - monosaccharides (pp. 79-100, 3 ref.); Carbohydrates - oligosaccharides (pp. 101-109, 4 ref.); Polysaccharides (pp. 111-130, 6 ref.); Pectic substances, plant gums (pp. 131-147, 10 ref.); Nonenzymic browning (pp. 149-167, 8 ref.); Lipids (pp. 169-183, 6 ref.); Carotenoids (pp. 185-194, 9 ref.); Terpenes, essential oils (pp. 195-208, 6 ref.); Steroids and tocopherols (pp. 209-218, 6 ref.); Lipid oxidation (pp. 219-233, 8 ref.); Phenolic compounds (pp. 235-247, 5 ref.); Enzymic browning (pp. 249-256, 6 ref.); Respiration (pp. 257-277, 6 ref.); Biochemical activity of microorganisms in food (pp. 279-287, 4 ref.); and Chlorophyll and photosynthesis (pp. 289-304, 5 ref.). VJG

58

Food science. [Book]

Birch, G. G.; Cameron, A. G.; Spencer, M.

Ed. 2, viii + 191pp. ISBN 0-08-021347-2 (hardcover), ISBN 0-08-021346-4 (flexicover) (1977) [many ref. En] Headington Hill Hall, Oxford OX3 0BW, UK; Pergamon Press Ltd. Price £6.95 (hardcover), £3.95 (flexicover) [Nat.

Coll. of Food Tech., Univ. of Reading, Weybridge, UK]

This new edition of an established textbook provides an introduction to food scientists on both specialist and general courses. Chapters are: Introduction (pp. 1-4); Components of food and drink (pp. 5-26, 12 ref.); Why do we need food? (pp. 27-51, 8 ref.); From farm to table (pp. 52-73, 9 ref.); Drink (pp. 74-86, 6 ref.); Food poisoning and the preservation of food (pp. 87-105, 10 ref.); Changes in food during storage and preparation (pp. 106-130, 13 ref.); Flavour, colour and texture (pp. 131-150, 5 ref.); Eating chemicals (pp. 151-165, 10 ref.); and Fads, fallacies and the future (pp. 166-181, 10 ref.). A 9pp. index is included. AL

59

Membrane separation processes. [Book]

Meares, P. (Editor)

vii + 600pp. ISBN 0-444-41352-9 (1976) [many ref. En] Amsterdam, Netherlands; Elsevier Scientific Publishing Co. Price f250.00; \$101.95 [Univ. of Aberdeen, Aberdeen, UK]

This book brings together accounts of a range of membrane processes which are at or near full-scale application, to explain their versatility as well as their underlying features. Chapters are: The physical chemistry of transport and separation by membranes, by P. Meares (pp. 1-38, 63 ref.); Liquid permeation through polymeric membranes, by H. D. Spriggs & N. N. Li (pp. 39-79, 107 ref.); Principles and practice of ultrafiltration, by W. F. Blatt (pp. 81-120, 49 ref.); Reverse osmosis (hyperfiltration) in water desalination, by F. L. Harris, G. B. Humphreys & K. S. Spiegler (pp. 121-186, 58 ref.); Hollow fibres in reverse osmosis, dialysis, and ultrafiltration, by B. Baum, W. Holley, Jr. & R. A. White (pp. 187-228, 57 ref.); Piezodialysis, by F. B. Leitz (pp. 261-294, 29 ref.); The separation of gases by selective permeation, by S. A. Stern (pp. 295-326, 63 ref.); Hydrocarbon separation by liquid-membrane processes, by R. P. Cahn & N. N. Li (pp. 327-349, 4 ref.); Enzyme membranes, by D. Thomas & S. R. Caplan (pp. 351-397, 90 ref.) including mention of applications in the food industry (pp. 389-390); Separators and membranes in electrochemical power sources, by J. A. Lee, W. C. Maskell & F. L. Tye (pp. 399-476, 288 ref.); [continued in following abstr.] AL

60

Membrane separation processes. [Book]

Meares, P. (Editor)

vii + 600pp. ISBN 0-444-41352-9 (1976) [many ref. En] Amsterdam, Netherlands; Elsevier Scientific Publishing Co. Price f250.00; \$101.95 [Univ. of Aberdeen, Aberdeen, UK]

[Continued from preceding abstr.] Recent developments in ion-selective membrane electrodes, by R. Bloch & E. Löbel (pp. 477-498, 103 ref.); The treatment of aqueous wastes and foods by membrane processes, by D. C. Sammon (pp. 499-527, 48 ref.) including sections on cheese

whey (pp. 518-522) and applications in food processing (pp. 522-525); and Biomedical applications of membrane processes, by C. R. Gardner (pp. 529-573, 260 ref.). Author and subject indexes are included. AL

61

The almanac of the canning, freezing, preserving industries. [Book]

Edward E. Judge & Sons Inc.

Ed. 62, 616pp. (1977) [En] 79 Bond Street, Westminster, Maryland 21157, USA Price \$18.00

This 62nd annual compilation of basic references for the canning, freezing, preserving and allied industries contains the following sections: Association officers and USA inspectors (pp. 8-25); Food law and regulations (pp. 26-77); Labelling and packaging (pp. 78-137); Emergency permit control, good manufacturing practice regulations (pp. 138-166); Food & Drug standards of identity, quality and fill (pp. 167-269); USDA quality grade standards, canned, glass & frozen foods (pp. 270-413); Raw products (pp. 414-454); US pack statistics (pp. 455-522); Canned food prices (pp. 523-531); International trade and world packs (canned, frozen and preserved foods) (pp. 532-548); Appendix (pp. 549-560); and Buyers' guide - machinery, supplies, services (alphabetical and classified section listings) (pp. 561-611). [See FSTA (1977) 9 6A384 for 61st edition.] AL

62

World food resources. Actual and potential. [Book]

Allaby, M.

vii + 418pp. ISBN 0-85334-731-X (1977) [many ref. En] Barking, Essex, UK; Applied Science Publishers Ltd. Price £15.00

This book is a comprehensive review of information on world food resources with chapters on: World food - feast or famine? (pp. 1-56, 12 ref.); Population and food demand: the Malthusian equation (pp. 57-100, 13 ref.); The green revolution (pp. 101-133, 13 ref.); An inventory of the world (pp. 134-174, 12 ref.); Hunters and farmers (pp. 175-190, 8 ref.); Farms and factories (pp. 191-227, 12 ref.); Joules and genes (pp. 228-258, 23 ref.); The importance of climate and weather (pp. 259-276, 12 ref.); Options for the future (pp. 277-305, 27 ref.); The oceans as a food source (pp. 306-332, 15 ref.); Employment, income distribution and nutrition (pp. 333-360, 27 ref.); A new economic order? (pp. 361-383, 8 ref.); and Scenarios for tomorrow (pp. 384-405, 16 ref.). A 3pp. bibliography is given (pp. 407-409), and there is also an 8pp. subject index. SP

63

[Amines and nitrosamines. Occurrence, significance, metabolism and determination.]
Amine und Nitrosamine. Vorkommen, Bedeutung, Stoffwechsel und Bestimmung.

Askar, A.

Fortschritte in der Lebensmittelwissenschaft No. 4, vi + 222pp. ISBN 3-7983-0204-9 (1976) [many ref. De] Berlin; Universitätsbibliothek der Technischen Universität [Inst. für Lebensmitteltech., Frucht- & Gemüsetech., Tech. Univ., Königin-Luise-Strasse 22, 1 Berlin (West) 33]

This book, the fourth in the series 'Fortschritte in der Lebensmittelwissenschaft' includes the following chapters: Biosynthesis of amines (pp. 5-13, 13 ref.); Occurrence of amines in various foods [milk, cheese, fish, wine, beer, sauerkraut, fruit, vegetables, seeds, fungi, tea, yeast extract and walnuts] (pp. 14-72, many ref.); The significance of amines in foods (with reference to their importance as aroma substances, in non-enzymic browning, as precursors of alkaloids, as a quality control criterion, as a source of poisoning, and to the functions of di- and polyamines, functions of biogenic amines and the use of biogenic amines in diagnosis) (pp. 73-103, many ref.); Metabolism of amines (pp. 104-139, 25 ref.); Nitrosamines (pp. 140-151, 33 ref.); Determination of amines [covering extraction, concentration, analysis by paper chromatography, TLC, GLC, MS, column chromatography and fluorometric methods, detn. of trimethylamine in fish, and detn. of nitrosamines] (pp. 152-199, many ref.); and Summary (pp. 203-213). A 7-pp. subject index is included. AJDW

NUTRITION

64

Nutrition labeling. How it can work for you. [Book]

Deutsch, R. M. National Nutrition Consortium Inc. 134pp. (1975) [En] 9650 Rockville Pike, Bethesda, Maryland 20014, USA; National Nutrition Consortium, Inc.

This booklet, prepared by panels of nutrition scientists and educators, is a guide to learning and understanding the science and the law of nutrition labelling. It provides the most reliable information currently available on nutritional labelling. It is directed mainly to those who communicate with consumers, and to help purchasers of food to understand and use nutrition labelling to improve their nutritional well-being. AL

65

[The composition of foods. Nutrient tables. Supplement II.] Die Zusammensetzung der Lebensmittel. Nährwert-Tabellen. II. Ergänzungslieferung. [Booklet]

Souci, S. W.; Fachmann, W.; Kraut, H.; Bosch, H. 45pp. ISBN-3-8047-0488-3 (1974) [De] Stuttgart, Federal Republic of Germany; Wissenschaftliche Verlagsgesellschaft mbH

These tables give data for concn. of moisture,

protein, fat, carbohydrates, crude fibre, ash, 13 elements, 14 vitamins, 12 amino acids, and other constituents as applicable. Mean values and ranges are given for the individual constituents, expressed as content in the edible portion of 1000 g food, and as content in 100 g edible portion. Foods covered in this supplement are calves' heart and liver, halibut, herrings (fresh and marinated), eel (fresh and smoked), redfish, trout, carp, shrimps, potatoes, lettuce, spinach, peas (fresh and canned), pears, sweet cherries, plums, redcurrants, blackcurrants, grapes, bananas, groundnuts (fresh and roasted), walnuts, peaches (fresh and canned) and grape juice. A revised subject index is included, together with a calorie/joule conversion table. [See also FSTA (1969) 1 11A296.] AJDW

66

Protein nutritional quality of foods and feeds. Part II. Quality factors - plant breeding, composition, processing, and antinutrients. [Conference proceedings]

Friedman, M. **United States of America**, American Chemical Society (Editor)
xx + 674pp. ISBN 0-8247-6282-7 (1975) [many ref. En] New York, USA; Marcel Dekker Inc.
Price \$49.50 [W. Regional Res. Lab., USDA, Berkeley, California, USA]

This book, which, together with Part I [FSTA (1976) 8 12G875-12G877], forms volume 1 in the series 'Nutrition and Clinical Nutrition' under the general editorship of R. E. Olson, contains the proceedings of the American Chemical Society Symposium on chemical and biological methods for protein quality evaluation, held in Atlantic City, New Jersey on Sept. 9-11, 1974, and supplemental invited contributions. Papers are: Breeding for improved nutritional values in cereals, by E. T. Mertz (pp. 1-12, 11 ref.); Proteins and amino acids of barley, oats, and buckwheat, by Y. Pomeranz (pp. 13-78, 113 ref.); Nutritional evaluation of high lysine barley fed to pigs, by S. O. S. Thomke & B. Widströmer (pp. 79-100, 16 ref.); Nutritional quality of rice endosperm, by B. M. Kennedy (pp. 101-117, 25 ref.); Pulse proteins, by H. K. Burr (pp. 119-134, 25 ref.); Biological qualities and functional properties of lima bean protein for bread enrichment, by B. S. Luh, S. Maneepun & R. B. Rucker (pp. 135-160, 26 ref.); Protein nutritive value of selected present and potential meat extenders, by M. L. Happich (pp. 161-185, 40 ref.); Nutritional evaluation of horsemeat, by S. J. Pintau, K.-T. Yuann & J. G. Bergan (pp. 187-196, 12 ref.); [Continued in following abstr.] JA

67

Protein nutritional quality of foods and feeds. Part II. Quality factors - plant breeding, composition, processing, and antinutrients. [Conference proceedings]

Friedman, M. **United States of America**, American Chemical Society (Editor)
xx + 674pp. ISBN 0-8247-6282-7 (1975) [many ref. En] New York, USA; Marcel Dekker Inc.
Price \$49.50 [W. Regional Res. Lab., USDA, Berkeley, California, USA]

[Continued from preceding abstr.] Nutritional and chemical evaluation of the protein of various finfish and shellfish, by V. D. Sidwell & M. E. Ambrose (pp. 197-209, 16 ref.); Factors affecting ruminant responses to protected amino acids and proteins, by G. A. Broderick (pp. 211-259, 178 ref.); Nitrogen metabolism in ruminants: protein solubility and rumen bypass of protein and amino acids, by J. H. Clark (pp. 261-304, 191 ref.); Mushrooms as a source of food protein, by R. H. Kurtzman (pp. 305-318, 21 ref.); Nutritional evaluation of alfalfa leaf protein concentrate, by E. M. Bickoff, A. N. Booth, D. de Fremery, R. H. Edwards, B. E. Knuckles, R. E. Miller, R. M. Saunders & G. O. Kohler (pp. 319-340, 37 ref.); The effects of processing conditions on the quality of leaf protein, by N. W. Pirie (pp. 341-354, 51 ref.); Cottonseed protein products: variation in protein quality with product and process, by W. H. Martinez & D. T. Hopkins (pp. 355-374, 26 ref.); Nutritional quality of several proteins as affected by heating in the presence of carbohydrates, by J. E. Knipfel, H. G. Botting & J. M. McLaughlan (pp. 375-391, 20 ref.); [continued in following abstr.] JA

68

Protein nutritional quality of foods and feeds. Part II. Quality factors - plant breeding, composition, processing, and antinutrients. [Conference proceedings]

Friedman, M. **United States of America**, American Chemical Society (Editor)
xx + 674 pp. ISBN 0-8247-6282-7 (1975) [many ref. En] New York, USA; Marcel Dekker Inc.
Price \$49.50 [W. Regional Res. Lab., USDA, Berkeley, California, USA]

[Continued from preceding abstr.] The assessment of thermal processing on wheat flour proteins by physical, chemical, and enzymatic methods, by L. P. Hansen, P. H. Johnston & R. E. Ferrel (pp. 393-415, 19 ref.); Effects of processing on the nutritive value of WSB [wheat-soy blend]-skim milk mixtures for infants, by F. Monckeberg, E. Yanez, D. Ballester, C. O. Chichester & T.-C. Lee (pp. 417-431, 4 ref.); Whey proteins for food and feed supplement, by E. Rorsum (pp. 433-470, 75 ref.); The nutritive quality of potato protein, by P. Markakis (pp. 471-487, 46 ref.); Effects of enzymes on nutritional quality and availability of proteins, by S. Schwimmer (pp. 489-521, 121 ref.); Effects of anti-nutritional and toxic factors on the quality and utilization of legume proteins, by I. E. Liener (pp. 523-550, 81 ref.); Problems in the digestibility of dry beans, by A. C. Olson, R. Becker, J. C. Miers, M. R. Gumbmann & J. R. Wagner (pp. 551-563, 19 ref.); Celiac disease: malabsorption of nutrients induced by a toxic factor in gluten, by D. D. Kasarda (pp. 565-593, 78 ref.); Biological effects of N^ε-(DL-2-amino-2-carboxyethyl)-L-lysine, lysinoalanine, by J. C. Woodard, D. D. Short, M. R. Alvarez & J. Reyniers (pp. 595-618, 25 ref.); and Protein:energy ratios - guidelines in the assessment of protein nutritional quality, by G. H. Beaton (pp. 619-634, 18 ref.)
Author and subject indexes are included. JA

69

Food consumption and planning. [Book]

Rao, K. K. P. N. (Editor)

xiii + 490pp. ISBN 0-08-016459-5 (1976) [39 ref. En] Oxford, UK; Pergamon Press Ltd. Price \$50; £24.50

This book, which is Vol. 5 of the International Encyclopaedia of Food and Nutrition series produced under the general editorship of H. M. Sinclair, provides a thorough background of the theoretical basis of techniques and comprehensive knowledge in the whole field of nutrition. It is written primarily for nutritionists, but it is of value to chemists, biochemists, medical practitioners, dieticians, veterinary surgeons, agriculturalists and surgeons. Chapters include: Food consumption: food balance sheets, food supplies, by W. Schulte, K. Becker & L. Naiken (pp. 1-30, 29 ref.); Food consumption: food consumption surveys - methods and results, by E. Reh (pp. 31-62); Food Consumption: levels and patterns-variation by geographical regions and socio-economic groups, by M. Flores (pp. 63-138, 96 ref.); Nutritional requirements: dietary allowances and requirements for calories and nutrients, by C. R. Pascual, C. L. Intengan, J. Bulatao-Jayme, R. F. Florentino & L. G. Alejo (pp. 139-219, many ref.); Nutritional and physiological basis of military rations, by C. F. Consolazio (pp. 221-313, 78 ref.); Industrial feeding in European countries, by E. N. Bennett (pp. 315-338); Alimentation in communities of old people and in hospitals, by H. G. de Pontanel & L. Berard (pp. 339-369); Special feeding: sports and athletics, mountaineering, and other expeditions, by M. J. Karvonen (pp. 371-424, many ref.); and Food control: legislation, standards, hygiene, and inspection, by L. I. Pugsley, (pp. 425-466, 39 ref.). GL

70

Essentials of food and nutrition. Vol. I.**Fundamental aspects. [Book]**

Swaminathan, M.

xi + 576pp. (1974) [many ref. En] Madras, India; Ganesh & Co. Price RS30; £4; \$10 [Cent. Food Tech. Res. Inst., Mysore, India]

This book is intended to serve as a text-book in fundamental aspects of nutrition for under-graduate and post-graduate students of nutrition and dietetics, food science and technology and home science and also as a reference book for studies of medicine and public health. Subjects covered include: carbohydrates; lipids; proteins; nucleic acids; the energy value of foods and energy requirements; vitamins; minerals; the nutritional value of foods; the effect of cooking and heat processing on the nutritional value of foods; lathyrism; recommended dietary allowances; the nutrition of infants, children, adolescents, expectant and nursing mothers, industrial workers, and athletes; the inter-relationship between nutrients; and energy and protein requirements. References for supplementary reading are appended to each chapter. GL

71

Essentials of food and nutrition. Vol. II. Applied aspects. [Book]

Swaminathan, M.

v + 515pp. (1974) [many ref. En] [Cent. Food Tech. Res. Inst., Mysore, India]

This book on applied aspects of nutrition is intended to serve the same readers as Vol. I [see preceding abstr.]. Chapters include: Food processing, preservation and storage (pp. 1-99, 2 ref.); Fortification of foods (pp. 100-116, 11 ref.); Toxicants naturally occurring in foods (pp. 117-132, 2 ref.); Food hygiene and food standards (pp. 133-145, 3 ref.); Emergency rations for human survival (pp. 146-150, 2 ref.); Preservation of foods by irradiation (pp. 151-163, 13 ref.); Sensory methods of analysis of foods (pp. 164-173, 6 ref.); Food allergy (pp. 174-181, 3 ref.); Food fadism and faulty food habits (pp. 341-345, 4 ref.); Role of food science and technology in overcoming malnutrition in developing countries (pp. 376-406, 10 ref.); and Bioassays with animals and growth and metabolic studies with human subjects (pp. 407-443, 24 ref.). GL

72

Psychodietetics. Food as the key to emotional health. [Book]

Cheraskin, E.; Ringsdorf, W. M., Jr.; Brecher, A. 228pp. ISBN 0-8128-1725-7 (1974) [20pp. of ref. En] New York, USA; Stein & Day Publishers

This book explores the relationship between diet and mental health, e.g. the role of vitamins in treatment of schizophrenia and the effect of hypoglycaemia on emotional disposition. The theory that much mental illness is due to allergy to food (e.g. cereals and milk) is discussed. In the final chapter, dealing with the composition of the optimal diet, eggs, natural cheeses, milk (preferably cultured), meat, seafood, poultry, fruit, fruit juices, vegetables, whole-grain breads and cereals, nuts and seeds are recommended as foods to eat liberally. It is suggested that a limited amount of butter is preferable to products made from hydrogenated refined vegetable oil but that the bulk of fats in the diet should be selected from unrefined vegetable oils. Of the foods to be avoided, sugar is considered the most harmful. ADL

73

Drug-induced nutritional deficiencies. [Book]

Roe, D. A.

xi + 272pp. ISBN 0-87055-205-8 (1976) [En] Westport, USA; AVI Publishing Co., Inc. [Div. of Nutr. Sci., Cornell Univ., Ithaca, New York, USA]

This book deals with nutritional disorders caused by drugs, and examines systematically the many mechanisms by which drugs influence the nutritional status of the patient and which may be preventable. Chapters are: Basic concepts (pp. 1-69, 271 ref.); Factors affecting nutritional requirements (pp. 70-91, 84 ref.); Variables determining incidence and risk (pp. 92-101, 23 ref.); Diagnosis of drug-induced malnutrition (pp.

102-128, 51 ref.); Drug-induced malabsorption (pp. 129-144, 86 ref.); Iatrogenic hyperexcretion and tissue depletion of minerals and vitamins (pp. 145-153, 30 ref.); Antivitamins (pp. 154-186, 139 ref.); Fetal malnutrition, abnormal development and growth retardation (pp. 187-201, 36 ref.); Alcohol and alcoholism (pp. 202-210, 42 ref.); Nutritional effects of anticonvulsants (pp. 211-221, 40 ref.); Nutritional effects of oral contraceptives (pp. 222-238, 62 ref.); Nutritional effects of antituberculous drugs (pp. 239-246, 34 ref.); Nutritional effects of anti-Parkinson drugs: L-dopa (pp. 247-252, 30 ref.); and Safety and prevention (pp. 253-262, 5 ref.). AL

74

Second book of food and nutrition. [Book]
Matthews, W.; Wells, D. United Kingdom, Flour Advisory Bureau
Ed. 3, x + 254pp. ISBN 0-901-762-23-7 (1976)
[En] Hartree House, Queensway, London W2 4SH, UK; Home Economics [21 Arlington Street, London SW1A 1RN, UK]

This book deals with the theory and practice of nutrition and with food technology. The information is arranged under the following 5 headings: Underlying theory of nutrition; Nutrition and food preparation; Some aspects of food technology; Marketing of food; and A review of nutrition in under-privileged countries. Individual chapters are: Proteins (pp. 1-12); Minerals (pp. 13-25); Vitamins (pp. 26-42); Carbohydrates and fats (pp. 43-61); Digestion (pp. 62-67); Some dietary problems (pp. 68-84); Planning meals (pp. 85-102); Convenience foods (pp. 103-122); Domestic storage of food (pp. 123-133); The cooking of food (pp. 134-144); The effect of cooking on the nutritive value of food (pp. 145-156); Advances in agricultural techniques (pp. 157-162); Some advances in food technology (pp. 163-174); Advances in food preservation (pp. 175-198); Food legislation (pp. 199-211); Packaging of food (pp. 212-218); Food marketing and handling (pp. 219-227); and The hungry nations (pp. 228-240). A 6pp. bibliography is included. [See FSTA (1975) 7 1A37 for Ed. 2.] AL

75

[Biochemistry of nutrition.] Biochemie der Ernährung. [Book]
Lang, K.
Ed. 3 xiv + 682pp. ISBN 3-7985-0375-3 (1974)
[De] Darmstadt, Federal Republic of Germany; Dr. Dietrich Steinkopff Verlag Price DM180.00
[Physiol. Chem. Univ. Inst. Mainz, Bad Krozingen, Federal Republic of Germany]

This revised edition of this comprehensive textbook of the biochemistry of nutrition includes the following chapters: Carbohydrates and their derivatives (pp. 11-38); Alcohols and hydroxy acids (pp. 38-48); Fats, fatty acids and phospholipids (pp. 48-118); Cholesterol (pp. 118-150); Aliphatic hydrocarbons (pp. 150-151); Nucleic acids and their constituents (pp. 151-155); Bases (pp. 155-

163); Protein (pp. 163-245); Water and minerals (pp. 245-321); Trace elements (pp. 321-366); Natural radioactivity (pp. 366-370); Radioactive contamination of foods as a result of nuclear weapon tests (pp. 370-379); Vitamins (pp. 380-580); Phenolic constituents of plants (pp. 580-594); and Miscellaneous food constituents (pp. 594-612). A 47-pp. bibliography is included, together with a 22-pp. subject index. AJDW

76

The soil factor in nutrition: animal and human. [Book]
Beeson, K. C.; Matrone, G.
xiv + 152pp. ISBN 0-8247-6484-6 (1976) [many ref. En] New York, USA; Marcel Dekker, Inc. Price FS66.00

This book, which is Vol. 2 in the Nutrition and Clinical Nutrition Series under the general editorship of R. E. Olson is divided into 3 parts: The geochemical environment and the plant (pp. 3-57); The geochemical environment and the animal (pp. 61-118); and The geochemical environment and man (pp. 121-147). It examines the effects exerted by mineral nutrients and other elements, and by climate and other environmental factors on nutritional components of foods and forages. Chapters included are: Development of the concept: the interrelation of soil-plant-animal and man (pp. 3-10); The soil and the plant (pp. 29-45, 14 ref.); The soil, the climate, and the plant (pp. 46-57, 19 ref.); Calcium and phosphorus (pp. 61-75); Iodine and fluorine (pp. 76-82, 13 ref.); Cobalt (pp. 83-93, 34 ref.); Copper and molybdenum (pp. 94-103, 21 ref.); Selenium (pp. 104-118, 41 ref.); The role of plants in the nutrition of man (pp. 121-135, 18 ref.); and Endemic diseases in man and the geochemical environment (pp. 136-147, 21 ref.). The chapters dealing with Ca, P, I, F, Co, Cu, Mo, and Se contain data on the concn. of the elements in plants. VJG

77

Nutrients in processed foods. Vitamins. Minerals. [Book]
United States of America, American Medical Association
xvii + 193pp. ISBN 0-88416-006-8 (1974) [many ref. En] Acton, Massachusetts, USA; Publishing Sciences Group, Inc. Price \$16

This 3-vol. series, Nutrients in Processed Foods, is a compilation of papers, discussions and recommendations from 3 symposia held between Mar. 1971 and Oct. 1973. The first vol., which is divided into 4 parts, examines the vitamin and mineral contents of foods. Earlier papers have been brought up to date by the contributing authors. Part I outlines the requirements for micronutrients in the population of USA, examining the evidence for deficiency, the effects of excessive intake and imbalance, and the problems encountered in the definition of need for some of the trace nutrients. In part 2, the influence of agricultural practices, processing, storage and distribution on the vitamin

and mineral contents and biological availability are discussed. Problems encountered in the assay of nutrients and in the evaluation of biological availability are also outlined. Part 3 covers the proposals for the classification of foods, patterns of food use to encourage innovative approaches to food fortification and consumer education. Part 4 contains task force reports dealing with the development of recommendations in needs for future research, fortification guidelines, education of consumers, regulations and the rationale and criteria for micronutrient improvement in foods. [See also following abstr.] GL

78

Nutrients in processed foods. Proteins. [Book] White, P. L.; Fletcher, D. C. **United States of America**, American Medical Association xxv + 219pp. ISBN 0-88416-007-6 (1974) [many ref. En] Acton, Massachusetts, USA; Publishing Sciences Group, Inc. Price \$16

The second vol., Proteins, which is divided into 5 parts, discusses the factors that influence the amount and quality of proteins in foods. In the first part, human protein requirements, including requirements by age, during pregnancy and lactation, under disease conditions and the effects of amino acid excess are reviewed. Part 2 is concerned with the assessment of protein quality and consideration is given to the current methods of evaluation from chemical, rat, chick, human and microbial assays to direct studies of human requirements. In part 3, factors influencing the nutritional value of proteins are discussed including the interaction with other macromolecules and the effects of industrial processing. Protein digestibility and amino acid availability, complementary amino acids, and supplementation and complementation of proteins are also outlined. Parts 4 and 5 are devoted to specific task force reports of major concerns in protein nutrition. [See also preceding and following abstr.] GL

79

Nutrients in processed foods. Fats. Carbohydrates. [Book] White, P. L.; Fletcher, D. C.; Ellis, M. **United States of America**, American Medical Association xx + 206pp. ISBN 0-88416-013-0 (1975) [many ref. En] Acton, Massachusetts, USA; Publishing Sciences Group, Inc. Price \$16

The third vol., which is divided into 3 parts, each with a final discussion, provides a new insight into present and future trends in the consumption of fats and carbohydrates with a review of their medical significance. Considerable attention is given to the technology of the modification of fats in foods and the functions of carbohydrates in food design and processing. Part 1 outlines the economic and functional considerations of changing the composition of dietary fats and oils, the technical options in fat modification, the tailoring of fats for technical and nutritional needs, the effects of prostaglandins on fat metabolism and the

manipulations of the fatty acid composition of livestock. In Part 2, functional considerations of sugars, starches, gums and carbohydrates are outlined, including the role of unavailable carbohydrates in digestion and the nutritional consequences of non-digestible carbohydrates. Part 3 discusses the interrelationship of foods and nutrients and the nutritional considerations, including diet and coronary heart disease, current topics in carbohydrate metabolism, low-calorie foods and the projected impact of fatty acid labelling on the composition of processed foods. [See also preceding abstr.] GL

80

Textbook of paediatric nutrition. [Book] McLaren, D. S.; Burman, D. (Editors) 416pp. ISBN 0-443-01413-2 (1976) [many ref. En] Edinburgh, UK; Churchill Livingstone [School of Med. & American Univ. Hospital, Beirut, Lebanon]

This comprehensive textbook comprises 4 parts: Nutrition in growth and development; Nutritional disorders; Nutritional aspects of other diseases; and Paediatric nutrition in the community. In the final part of the book, Chapter 19 (Manufactured foods, by A. E. Bender, pp. 375-386, 9 ref.) reviews milk-based infant foods for normal feeding (full-cream, half-cream, evaporated and humanized milks) and for special purposes (acidified, citrated, lactose-free and low-Ca milks). This chapter also considers the problem of allergy to milk, reviews weaning foods, and examines safety considerations in relation to additives, radioactive fallout, nitrates and nitrites, and Na content. The last chapter of the book, Nutrition in a health service, by W. T. C. Berry (pp. 387-397, 21 ref.), deals particularly with welfare milk schemes in the UK. There is an 18-pp. subject index. ADL

81

Having herds: pastoral herd growth and household economy. [Book] Dahl, G.; Hjort, A. 335pp. ISBN 91-85284-02-5 (1976) [many ref. En] Stockholm, Sweden; Department of Social Anthropology, University of Stockholm Price 45kr; \$10.00

This book (No. 2 in the series Stockholm Studies in Social Anthropology) gives a detailed discussion of economic aspects of cattle, goat, sheep and camel herds in pastoral cultures in Africa; the significance of these animals as a source of food (milk, blood, meat) is discussed, together with the nutritional values of these foods. AJDW

82

Nutritious foods for everybody. Report of the Calcutta Workshop. Park Hotel, Calcutta on 21-22 November, 1972. [Book] India, Protein Foods Association of India 127pp. (1972) [En] Bombay, India

The report of the Calcutta workshop, a marketing workshop based on a survey of food habits in Calcutta city, and compiled by K. T.

Achaya, includes reports on Food habits in Calcutta, by C. Mitra (pp. 15-44); and Proposals for the promotion of Special Muri [puffed rice], a low-cost nutritionally-fortified food, among the residents of the Calcutta Municipal Corporation area, by S. Ghosal (pp. 45-50). It also contains working group reports and discussions on: Staples (pp. 55-64); Snack foods (pp. 67-79); Beverages [Nutritone - a vegetable toned milk, Nutrimilk - a vegetable-based milk, Nutripak - a dietary vitamin supplement, and Nutritab - a protein-enriched flavoured tablet] (pp. 83-95); Infant foods [fortified dairy milk and nutrient cubes] (pp. 99-110); and Constraints on the manufacture and delivery of low-cost nutritious foods (pp. 113-115). The product possibilities and marketing strategies for 5 new high-nutrient products are summarized. AL

83

Basic nutrition in health and disease - including selection and care of food. [Book]

Howe, P. S.

Ed. 6, xi + 454pp. ISBN 0-7216-4788-X (1976) [many ref. En] West Washington Square, Philadelphia, Pennsylvania 19105, USA; W. B. Saunders Company [Contra Costa Community Coll., San Pablo, California, USA]

Fundamentals of nutrition are presented simply and clearly. The 39 chapters are in 3 sections: Normal nutrition (pp. 1-154); Diet therapy (pp. 155-238); and Selection and care of food (pp. 239-325). Appendix 1 (pp. 327-379) includes tables showing the nutritive value of the edible part of foods, contents of cholesterol, purine, Na and K in foods, and fatty acid composition of food fats; Appendix 3 (pp. 399-435) gives information on modified diet patterns (allergy diets). AL

84

Normal and therapeutic nutrition. [Book]

Robinson, C. H.; Lawler, M. R.

Ed. 15, x + 739pp. ISBN 0-02-402300-0 (1977) [many ref. En] New York, USA; Macmillan Publishing Co. Ltd. Price £9.75

This book is intended for students of nursing and dietetics, as well as a useful work of reference. It is divided into 2 parts. Part 1, Normal Nutrition, contains 24 chapters including: Food and its relation to health (pp. 3-15, 32 ref.); Proteins and amino acids (pp. 41-60, 36 ref.); Carbohydrates (pp. 61-75, 26 ref.); Lipids (pp. 76-90, 26 ref.); Mineral elements (pp. 102-124, many ref.); The fat-soluble vitamins (pp. 148-165, 69 ref.); The water-soluble vitamins: ascorbic acid (pp. 166-171, 23 ref.); The water-soluble vitamins: the vitamin-B complex (pp. 172-195, 73 ref.); Cultural food patterns in the United States (pp. 224-236, 40 ref.); Food selection for quality and economy (pp. 237-252, 19 ref.); Safeguarding the food supply (pp. 253-270, 45 ref.); and Controls for the safety and nutritive value of the food supply (pp. 271-283, 40 ref.). Part 2, Therapeutic Nutrition, contains 22 chapters which give diets for use with various

diseases and disorders. The book contains 4 appendices, including in tabular form: Nutritive values of the edible part of foods; Mineral and vitamin content of foods: Na, K, P, Mg and Zn; Solacin, pantothenic acid, vitamins B₆, B₁₂ and E; Nutritive values of baby foods; Amino acid content of selected foods; Cholesterol content of the edible portion of food; and Composition of some alcoholic beverages. A 17-pp. index is also included. DIH

85

Carbohydrates and health. [Book]

Hood, L. F.; Wardrip, E. K.; Bollenback, G. N. (Editors)

ix + 147pp. ISBN 0-87055-223-6 (1977) [many ref. En] Westport, Connecticut, USA; AVI Publishing Co. Inc. [Cornell Univ., Ithaca, New York, USA]

This book contains all of the papers presented at the Symposium organized by the Carbohydrate division of the IFT for the annual meeting of the IFT in Anaheim, California, on June 8, 1976. The book reviews the role of carbohydrates in nutrition and health. Chapters are: World carbohydrate consumption: the concept of multiple carbohydrate staples, by N. W. Jerome (pp. 1-12, 26 ref.); Mono- and disaccharide metabolism in feasting and fasting, by G. M. Reaven (pp. 13-26); Absorption, metabolism and application of polyols, by B. K. Dwivedi (pp. 27-38, 16 ref.); Digestion, absorption and metabolism of starch, by L. J. Filer, Jr. (pp. 39-43, 17 ref.); Metabolism of natural and certain cellulosic gums, by G. A. Towle (pp. 44-56, 42 ref.); The metabolism of methylcellulose gums, by K. D. Nitschke & T. H. Fiero (pp. 57-68, 3 ref.); Analytical problems of fiber, by P. J. van Soest & J. B. Robertson (pp. 69-83, 29 ref.); The role of dietary fiber in nutrition and health, by G. A. Leveille (pp. 84-93, 25 ref.); Dietary carbohydrates and mineral nutrition, by D. R. van Campen & L. F. Hood (pp. 94-108, 60 ref.); Role of carbohydrates in dental caries, by W. H. Bowen (pp. 109-113, 32 ref.); Dietary carbohydrates in diabetes and nutrition, by E. L. Bierman (pp. 115-127, 12 ref.); and Carbohydrate sweeteners in nutrition: fact and fantasy, by F. M. Clydesdale (pp. 128-139, 26 ref.). There is a 7pp. subject index. SP

PROTEIN FOODS

86

Single cell proteins from cellulose and hydrocarbons. [Book]

Rockwell, P. J.

Food Technology Review, Noyes Data Corporation No. 34, x + 337pp. ISBN 0-8155-0626-0 (1976) [En] Park Ridge, New Jersey, USA; Noyes Data Corporation Price \$39.00

This review contains carefully excerpted and collated data from diverse and difficult-to-locate sources. It is divided into two parts, part 1 (pp. 4-136) being primarily concerned with a process developed at Louisiana State University for culturing and harvesting microorganisms, using sugarcane bagasse as the C source. Part 2 (pp. 138-331) presents, in condensed form, most of the US patents granted over the past 20 yr concerning the production of SCP from hydrocarbons. It is an updated version of the book, *Proteins from hydrocarbons*, by S. Gutcho [see FSTA (1974) 6 1G27]. Chapters included are: Sources and characteristics of cellulose (pp. 4-16, 24 ref.); LSU project description (pp. 17-57, 15 ref.); Pilot plant for LSU project (pp. 58-91, 15 ref.); Protein isolation from single-cell organisms (pp. 92-124, 29 ref.); Economic potential of single-cell protein (pp. 125-136, 6 ref.); Liquid hydrocarbon feedstocks (pp. 138-169); Gaseous and solid hydrocarbon feedstocks (pp. 170-182); Special strains of microorganisms (pp. 183-196); Growth promoting techniques (pp. 197-230); Fermentation techniques (pp. 231-263); and Recovery and processing techniques (pp. 264-331). Patents are also indexed by number, assignees and inventors. This book is also No. 74 in the Chemical Technology Review Series. VJG

87

Food proteins. [Book]

Whitaker, J. R.; Tannenbaum, S. R.
xi + 602pp. ISBN 0-87055-230-9 (1977) [many ref. En] Westport, Connecticut, USA; AVI Publishing Co. Inc. [Univ. of California, USA]

This book is the first in a series of annual basic symposia on selected topics of major importance to food scientists and technologists. Chapters are: Effects of amino acid composition and microenvironment on protein structure, by K. E. Van Holde (pp. 1-13); Denaturation and renaturation of proteins, by J. R. Whitaker (pp. 14-49); Water and protein hydration, by O. Fennema (pp. 50-90); Cellular degradation of proteins, by A. Tappel (pp. 91-105); Protein separation and analysis by electrophoretic methods: an overview of principles, by N. Catsimpooulas (pp. 106-120); Muscle proteins, by D. E. Goll, R. M. Robson & M. H. Stromer (pp. 121-174); Milk proteins, by J. R. Brunner (pp. 175-208); Egg proteins, by D. T. Osuga & R. E. Feeney (pp. 209-266); Cereal proteins, by G. E. Inglett (pp. 267-290); Legumes: seed composition and structure, processing into protein products, and protein properties, by W. J. Wolf (pp. 291-314); Single-cell protein, by S. R. Tannenbaum (pp. 315-330); Some observations on the roles of basic research in development of high protein food products, by J. M. McIntire (pp. 331-336); Nutrition and technology: the role of sensory properties of proteins, by C. F. E. von Sydow & I. H. Qvist (pp. 337-346); Protein quality and its determination, by D. M. Hegsted (pp. 347-362); Human amino acid and nitrogen requirements as

the basis for evaluation of nutritional quality of proteins, by A. E. Harper (pp. 363-386); Functional properties of proteins and their measurement, by H. M. Schoen (pp. 387-400); [continued in following abstr.] AL

88

Food proteins. [Book]

Whitaker, J. R.; Tannenbaum, S. R.
xi + 602pp. ISBN 0-87055-230-9 (1977) [many ref. En] Westport, Connecticut, USA; AVI Publishing Co. Inc. [Univ. of California, USA]
[Continued from preceding abstr.] Chemical and nutritional modifications of food proteins due to processing and storage, by J. C. Cheftel (pp. 401-445); Effects of lysine modification on chemical, physical, nutritive, and functional properties of proteins, by M. Friedman (pp. 446-483); Protein texturization, by F. E. Horan (pp. 484-515); Plant protein sources, by G. O. Kohler & C. K. Lyon (pp. 516-541); Food protein production: land, energy, and economics, by D. Pimentel & M. Pimentel (pp. 542-553); Outlook for alternative protein sources in processed foods, by R. H. Forsythe & E. J. Briskey (pp. 554-570); and Research needs in protein resources, by M. Milner, N. S. Scrimshaw & D. I. C. Wang (pp. 571-594). Numerous ref. follow each chapter. A 7pp. index is included. AL

CATERING

89

The future of food service 1985-1990. [Book]

Powers, T. F. *United States of America*,
Pennsylvania State University, Food Service & Housing Administration
xviii + 250pp. (1975) [many ref. En] University Park, Pennsylvania, USA Price \$6.95

Chapters in this publication are: Introduction to the food service scenarios (pp. 3-16, 6 ref.); The standard world of 1985 (pp. 19-33, 3 ref.); The optimistic food service scenarios (pp. 37-52, 3 ref.); The restaurant industry of the future (pp. 55-84, 12 ref.); The active government scenario (pp. 87-147, 23 ref.); The pessimistic food service scenarios (pp. 151-157); The foods we will eat, by L. M. Renaghan, J. M. Powers & T. F. Powers (pp. 161-193, 24 ref.); The restaurant service scenario (pp. 197-232, 23 ref.); and Toward food service curriculum planning: summary and conclusion (pp. 235-250). This book is in the Service Management Reports series. AL

90

Centralized food service systems. [Book]

Powers, T. F.; Swinton, J. R. **United States of America**. Pennsylvania State University, Food Service & Housing Administration (Editors) xiii + 200pp. (1975) [many ref. En] University Park, Pennsylvania, USA Price \$6.95

Papers in this book are: Large quantity food production systems, by T. F. Powers & B. J. Williamson (pp. 1-37, 7 ref.); The Michigan State University vegetable processing center, by T. L. Smith & D. H. Ralph (pp. 39-61); Microbiological quality control for centralized food preparation facilities, by J. M. Powers (pp. 63-117, 44 ref.); Problems with regulations in the food processing and delivery industries - Pennsylvania: a case study, by M. Kroger (pp. 119-139); The distribution-transportation problem of commissary operations, by S. H. Mann & C. M. Miles (pp. 141-190, 40 ref.); and The potential commissary function for the wholesaler or how it all might work for the independent, by T. F. Powers (pp. 191-198). This book is in the Service Management Reports series. AL

91

Casseroles and vegetables for foodservice menu planning. [Book]

Blair, E. C.

278pp. ISBN 0-8436-2121-4 (1976) [En] Boston, Massachusetts, USA; Cahners Books International Inc. Price \$12.50

The casserole section of the book has some 140 recipes for dishes made with cheese, eggs, poultry, seafood and a comprehensive range of meats. The vegetable section contains > 125 recipes for a wide variety of vegetables from the potato to whole okra pods. Hints on handling, seasoning, combining vegetables, stuffing them and serving chilled are included. The extensive assortment of recipes includes a variety of scalloped dishes, souffles, vegetable casseroles, and hash. AL

CHEMISTRY

92

[Applied biochemistry. Food chemistry, fermentation chemistry, agricultural chemistry.]

Angewandte Biochemie. Lebensmittelchemie.

Gärungschemie, Agrarchemie. [Book]

Bruchmann, E.-E.

255pp. ISBN 3-8001-2301-0 (1976) [many ref. De] Stuttgart, Federal Republic of Germany; Eugen Ulmer, Price DM58 [Univ. Hohenheim, Stuttgart, Federal Republic of Germany]

This basic textbook of applied biochemistry includes the following sections: Vitamins, provitamins and coenzymes (pp. 9-42) [covering

general aspects of vitamin chemistry and vitamin technology, and details of individual vitamins, provitamins and coenzymes]; Enzymes (pp. 43-132) [covering general aspects of enzyme chemistry and enzyme technology, details of individual enzymes, and interaction between enzymes]; and Fermentation (pp. 133-237) [covering microorganisms as catalysts, general aspects of fermentation technology, anaerobic fermentations, and aerobic fermentations and biosyntheses]. A 2-pp. bibliography and a 16-pp. subject index are given. AJDW

93

The contribution of chemistry to food supplies.

[Conference proceedings]

Morton, I.; Rhodes, D. N. **International Union of Pure & Applied Chemistry; International Union of Food Science & Technology** (Editors)

viii + 440pp. ISBN 0-408-70632-5 (1974) [many ref. En] London, UK; Butterworth & Co. (Publishers) Ltd.

This book contains 17 invited papers and 8 selected contributed papers presented at the symposium, held in Hamburg (Federal Republic of Germany) on 29-31 Aug. 1973. Invited papers were: International science and technology and international development, by G. F. Stewart (pp. 1-7); IUPAC [International Union of Pure & Applied Chemistry] programme in relation to food supplies, by H. Egan (pp. 9-14, 6 ref.); Modification of oils and fats, by J. W. E. Coenen (pp. 15-54, 45 ref.), which discusses supply of and demand for fats and oils, their composition and properties, and modification by fractionation, interesterification and hydrogenation; Chemical modification of carbohydrates, by K. Heyns (pp. 55-87, 61 ref.), which deals with chemically modified carbohydrates suitable for use in foods; The synthesis of proteins, by M. Pyke (pp. 89-97, 27 ref.); Odor, taste and molecular structure, by M. G. J. Beets (pp. 99-152, 47 ref.), which discusses fundamental aspects of the olfactory and gustatory processes; Contaminants in food: mycotoxins, by J. C. Ayres (pp. 153-208, many ref.), which discusses the present status of aflatoxins, sterigmatocystins, ochratoxins, patulin, zearalenone, the T-2 toxins, psoralens, penicillic acid, citrinin and citreoviridin as they relate to foods; Trace polynuclear aromatic hydrocarbon analysis, by E. O. Haenni & H. Fischbach (pp. 209-225, 81 ref.), which considers analytical control of polycyclic aromatic hydrocarbons in foods and food additives; [Continued in following abstr.] JA

94

The contribution of chemistry to food supplies.

[Conference proceedings]

Morton, I.; Rhodes, D. N. **International Union of Pure & Applied Chemistry; International Union of Food Science & Technology** (Editors)

viii + 440pp. ISBN 0-408-70632-5 (1974) [many ref. En] London, UK; Butterworth & Co. (Publishers) Ltd.

[Continued from preceding abstr.] Trace nitrosamine analysis, by A. E. Wasserman (pp. 227-

246, 68 ref.); New protein processes, by J. Hawthorn (pp. 247-253, 13 ref.); Structure by textile techniques, by A. D. Odell (pp. 255-258, 7 ref.), which discusses texturization of vegetable protein by wet spinning techniques; Research and development of new plant protein foods in Japan, by T. Watanabe (pp. 259-266, 14 ref.), which discusses wheat and soybean products; Structure by extrusion cooking, by O. B. Smith (pp. 267-294, 15 ref.), which reviews methods developed to structure foods by extrusion cooking and discusses effects of processing variables on structure and texture; Appraisal of the nutritional significance of new proteins for human consumption, by N. S. Scrimshaw & V. R. Young (pp. 295-321, 42 ref.); Assessing the safety of new proteins, by J. M. Philp (pp. 323-343, 97 ref.); Chemical properties of new proteins in relation to structural possibilities, by W. Manson (pp. 345-351, 10 ref.); and The chairman's closing remarks to the session entitled 'Development and evaluation of new proteins', by J. H. Hulse (pp. 353-355). Contributed papers were: On the role of carbonyl compounds in protein changes during wheat flour aging, by E. Primo, S. Barber, C. Benedito de Barber & J. Ribo (pp. 357-367, 30 ref.), which examines effects of ageing and of chemical improvement of flour (with formaldehyde and iodate) on gluten proteins and on dough characteristics and examines the occurrence of carbonyl-protein interactions in flour during ageing; [continued in following abstr.]. JA

95

The contribution of chemistry to food supplies.

[Conference proceedings]

Morton, I.; Rhodes, D. N. International Union of Pure & Applied Chemistry; International Union of Food Science & Technology (Editors)
viii + 440pp. ISBN 0-408-70632-5 (1974) [many ref. En] London, UK; Butterworth & Co. (Publishers) Ltd.

[Continued from preceding abstr.] The evaluation of novel proteins by amino acid analysis, by M. G. Davies & A. J. Thomas (pp. 369-374, 4 ref.); Utilization of whey proteins in human nutrition, by E. Forsum & L. Hambræus (pp. 375-383, 18 ref.); Food additives and contaminants: research requirements, by G. A. H. Elton (pp. 385-391), which discusses research requirements relating to the safety in use of food additives and to the potential hazards of food contaminants; Unconventional proteins as aroma precursors in processed foods, by I. Qvist & E. von Sydow (pp. 393-397, 12 ref.); Some observations on the change of bioquinones in [germinating] cereals due to exogenous agents [sunshine, coumarin, ATP, gibberellic acid], by E. Krasznér-Berndorfer & L. Telegdy Kovats (pp. 399-409, 5 ref.); Contribution of amino acids and peptides towards food flavour, by K. H. Ney (pp. 411-425, 71 ref.); and Pilot plant studies of vegetable protein production, by H. S. Olsen & K. P. Poulsen (pp. 427-440, 9 ref.), which covers the isolation of protein from broad beans and soybeans. JA

96

Materials and technology. Vol. VII. Vegetable food products and luxuries. [Book]

Oss, J. F. van
xxxi + 905pp. ISBN 0-582-46207-X (1975)
[many ref. En] London, UK; Longman Group Ltd. Price £20

This is the 7th volume of an 8 volume encyclopedia covering materials used in industry and commerce, and their technology. It sets out sources, manufacture, processing and use of both natural and synthetic products and provides statistics of world trade, production and prices. Chapters include: Fertility and fertilizers (pp. 1-88, 83 ref.); Control of plant infestation (pp. 89-186, 20 ref.); Structure and constituents of vegetable foodstuffs (pp. 187-229, 10 ref.); Cereals (pp. 231-285, 20 ref.); Crops (including root crops, brassicas, legumes, salad crops, fruits, nuts, mushrooms and other edible fungi) (pp. 287-438, 19 ref.); Wheat and rye and their flour products (pp. 441-510, 16 ref.); Starch (pp. 511-558, 6 ref.); Sugars - sucrose, glucose and fructose (pp. 559-628, 18 ref.); Synthetic sweeteners, honey and confectionery products (pp. 629-644, 16 ref.); Spices, hot beverages, tobacco (pp. 645-709, 13 ref.); Preservation of vegetable food (pp. 711-786, 23 ref.); and Alcoholic fermentation processes and products (pp. 787-884, 13 ref.). VJG

97

Food chemistry. [Book]

Meyer, L. H.
xiv + 385pp. (1973) [many ref. En] New Delhi, India; Affiliated East-West Press Private Ltd. Price Rs15.75 [Dep. of Chem., W. Michigan Univ., Kalamazoo, Michigan, USA]

This book aims to provide a unified picture of foods from a chemical standpoint. The primary emphasis is on the composition of foods and the changes that occur when they are subjected to processing. Chapters included are: Development of food chemistry (pp. 1-11, 3 ref.); Fats and other lipids (pp. 12-64, 28 ref.) [including physical and chemical properties of edible fats and oils, flavour changes, and technology]; Carbohydrates (pp. 65-113, 29 ref.) [including identification and changes on cooking]; Proteins in foods (pp. 114-147, 20 ref.); The flavour and aroma of food (pp. 148-170, 20 ref.); Meat and meat products (pp. 171-217, 58 ref.); Vegetables and fruits (pp. 218-292, 93 ref.); Milk and milk products (pp. 293-315, 8 ref.); Cereals and their use (pp. 316-350, 22 ref.) and Food additives (pp. 351-355, 7 ref.). VJG

98

Introductory food chemistry. [Book]

Garard, I. D.
vii + 312pp. ISBN 0-87055-206-6 (1976) [many ref. En] Westport, Connecticut, USA; AVI Publishing Co., Inc. Price £25.00 (US) £26.00 (Foreign) [Dep. of Chem., Rutgers State Univ., New Brunswick, New Jersey, USA]

This book is for college students who have a

professional interest in the chemistry of food, and should be of use to chemists and home economists who are working in food science. Chapters included are: Origins of food chemistry (pp. 1-8, 18 ref.); Composition and properties of the fats (pp. 9-34, 22 ref.); Carbohydrates (pp. 35-57, 31 ref.); Proteins (pp. 58-77, 37 ref.); Minerals (pp. 78-85, 11 ref.); Vitamins (pp. 86-105, 13 ref.); Food analysis (pp. 106-117, 13 ref.); Colloids (pp. 118-133, 14 ref.); Food additives (pp. 134-147, 16 ref.); Food preservation (pp. 148-168, 23 ref.); Dairy products (pp. 169-189, 27 ref.); Oil and fat industries (pp. 190-212, 21 ref.); Cereal products (pp. 213-236, 34 ref.); Sugar and related industries (pp. 237-251, 23 ref.); Convenience foods (pp. 252-269, 35 ref.); Colors and flavors (pp. 270-288, 60 ref.); and Food hazards (pp. 289-305, 25 ref.).
VJG

99

What people eat. An introduction to chemistry and food sciences. [Book]

Raw, I.; Bromley, A.; Pariser, E. R.; Vournakis, J. 400pp. ISBN 0-913232-15-7 (1975) [En] Los Altos, California, USA; William Kaufmann, Inc. Price \$9.00 [City Coll., New York, USA]

This book, a revised experimental edition, is intended for students making a study of their own diet. It consists of a laboratory section (pp. 1-61) dealing with duplicate meal analysis and covering recording of intake and details of tests, and a textbook section. The latter contains chapters on: Tools for measurement; Matter: some properties; Water and food: separation methods; Major food components: more separations; Molecules and chemical reactions; Do you obey chemical laws?; Ash -elements and analyses; Electricity, valence and chemical reactions; What are atoms made of?; Acids, bases and pH; Organic molecules; and Lipids, carbohydrates and proteins. [See also following abstr.] AL

100

Principles of food science. Part I. Food chemistry. [Book]

Fennema, O. R. (Editor)
xi + 792p. ISBN 0-8247-6350-5 (1976) [many ref. En] New York, USA; Marcel Dekker Inc. [Dep. of Food Sci., Univ. of Wisconsin, Madison, Wisconsin, USA]

This book, part I of Volume 4 in the series 'Food Science, a Series of Monographs', produced under the general editorship of O. R. Fennema [see FSTA (1977) 9 5E185 for part II of Volume 4], is primarily designed to fill the need for a food chemistry textbook suitable for food science students and also to serve as a reference source for persons involved in the food industry. It contains the following chapters: Introduction to food chemistry, by O. R. Fennema (pp. 1-12, 23 ref.); Water and ice, by O. R. Fennema (pp. 13-39, 61 ref.); Carbohydrates, by J. E. Hodge & E. M. Osman (pp. 41-138, 233 ref.); Lipids, by L. Dugan, Jr. (pp. 139-203, 86 ref.); Amino acids, peptides, and proteins, by A. F. Anglemier & M. W.

Montgomery (pp. 205-284, 149 ref.); Enzymes, by T. Richardson (pp. 285-345, 121 ref.); Vitamins and minerals, by S. R. Tannenbaum, (pp. 347-384, 99 ref.); Pigments, by F. M. Clydesdale & F. J. Francis (pp. 385-426, 45 ref.); Flavors, by R. M. Pangborn & G. F. Russell (pp. 427-464, 88 ref.); [continued in following abstr.] JA

101

Principles of food science. Part I. Food chemistry. [Book]

Fennema, O. R. (Editor)
xi + 792pp. ISBN 0-8247-6350-5 (1976) [many ref. En] New York, USA; Marcel Dekker Inc. [Dep. of Food Sci., Univ. of Wisconsin, Madison, Wisconsin, USA]

[Continued from preceding abstr.] Other desirable constituents of food, by R. C. Lindsay (pp. 465-513, 126 ref.); Undesirable or potentially undesirable constituents of food, by G. N. Wogan (pp. 515-537, 65 ref.); Food dispersions, by W. D. Powrie & M. A. Tung (pp. 539-575, 45 ref.); Characteristics of muscle tissue, by H. O. Hultin (pp. 577-617, 122 ref.); Characteristics of edible fluids of animal origin: milk, by J. R. Brunner (pp. 619-658, 41 ref.); Characteristics of edible fluids of animal origin: eggs, by W. D. Powrie (pp. 659-675, 42 ref.); Characteristics of edible plant tissues, by N. F. Heard (pp. 677-764, 127 ref.); and Integration of chemical and biological changes in food and their influence on quality, by S. R. Tannenbaum, (pp. 765-776, 18 ref.). A subject index is included. JA

102

Laboratory manual in food chemistry. [Book]

Woods, A. E.; Aurand, L. W.
vii + 72pp. ISBN 0-87055-220-1 (1977) [En] Westport, Connecticut, USA; AVI Publishing Co., Inc. Price \$1.00 [Middle Tennessee State Univ., Murfreesboro, Tennessee, USA]

This manual is intended as a supplement to the authors' textbook 'Food Chemistry' [see FSTA (1974) 6 2A77], and most of the laboratory experiments are designed to be able to be performed by students in a period of 3 h. Questions are included with the experiments. After an introduction (pp. 1-5) that deals with the statistical interpretation of results, the manual contains the following experimental sections: Solutions (pp. 6-10); Colloids (pp. 11-12); Carbohydrates (pp. 13-19); Lipids (pp. 20-25); Proteins (pp. 26-29); Enzymes (pp. 30-33); Vitamins (pp. 34-36); Metal analysis in foods using atomic absorption (pp. 37-39); Separation and identification of alcohols and other volatiles in whiskey and other alcoholic beverages (pp. 40-41); Calorimetry (pp. 42-48); Anthocyanins (pp. 49-51); Isolation and purification of lycopene (pp. 52-53); and Isolation and purification of phosvitin: a phosphoprotein from egg yolk (p. 54). 2 appendices are included: Preparation of solutions (pp. 55-61); and Calculation used in food analysis (pp. 62-72, 3 ref.). DIH

103

Radiation chemistry of major food components. Its relevance to the assessment of the wholesomeness of irradiated foods. [Book]

Elias, P. S.; Cohen, A. J. (Editors)
xii + 220pp. ISBN 0-444-41587-4 (1977) [many ref. En] Amsterdam, Netherlands; Elsevier Scientific Publishing Company

This book is a collection of critical reviews, or radiation chemistry and stability of food components, commissioned by the International Project in the Field of food irradiation. It contains a general introduction (pp. 1-4) by P. S. Elias, and the following individual reviews: Chemical effects of irradiation, by A. J. Swallow (pp. 5-20, 10 ref.); Radiation chemistry of lipids, by W. W. Nawar (pp. 21-61, 102 ref.); Radiation chemistry of proteins, by W. M. Urbain (pp. 63-130, 52 ref.); Radiation chemistry of carbohydrates, by J.-F. Dauphin & L. R. Saint-Lebe (pp. 131-185, 387 ref.); and Radiation chemistry of vitamins, by P. P. Tobback (pp. 187-220, 95 ref.). DIH

104

Food science - a chemical approach. [Book]

Fox, B. A.; Cameron, A. G.
Ed. 3, 380pp. ISBN 0-340-21366-3 (hardback), ISBN 0-340-20962-3 (paperback) (1977) [many ref. En] PO Box 702, Dunton Green, Sevenoaks, Kent, UK; Hodder & Stoughton Ltd. Price £4.75 (hardback); £2.45 (paperback)

This book is intended for all concerned with elementary food science, in particular students of food science and technology, home economics, catering and nutrition. Chapters are: Food and its function (pp. 11-21); Enzymes and life (pp. 22-32); Digestion and absorption (pp. 33-41); Basic chemistry (pp. 42-68); Alcohols and acids (pp. 69-91); Oils, fats and colloids (pp. 92-130); Carbohydrates, I - sugars (pp. 131-150), II - polysaccharides (pp. 151-188); Amino acids & proteins (pp. 189-223); Water and mineral elements (pp. 224-247); Vitamins (pp. 248-272); Cooking and diet (pp. 273-304); Food spoilage, preservation and hygiene (pp. 305-342); and Chemicals in food (pp. 343-361). Suggestions for further reading follow each chapter. A general reading list and an index are included. AL

105

Biochemistry of carbohydrates. [Book]

Whelan, W. J. (Editor)
441pp. ISBN 0-8391-1044-8 (1975) [many ref. En] London, UK; Butterworth & Co. (Publishers) Ltd. Price £10.45 [Univ. of Miami, Florida, USA]

This is Vol. 5 in Biochemistry Series One of the MTP International Review of Science. The consultant editors for the series, which now has 12 different titles, are H. L. Kornberg and D. C. Phillips. Individual chapters are intended to be comprehensive reviews of the progress of research

in their respective topics that will also be of interest to non-specialist biochemists. Chapters include: Stereochemistry and binding behaviour of carbohydrate chains, by D. A. Rees (pp. 1-42, 178 ref.); and Chemistry and biochemistry of starch, by French (pp. 267-335, 166 ref.). An 8pp. subject index is included. DIH

106

Food proteins. Improvement through chemical and enzymatic modification. [Conference proceedings]

Feeney, R. E.; Whitaker, J. R. (United States of America, American Chemical Society, Division of Agricultural & Food Chemistry) (Editors)
Advances in Chemistry Series 160, viii + 312pp. ISBN 0-8412-0339-3 (1977) [many ref. En] Washington, DC 20036, USA Price \$23.00

Papers presented at a symposium sponsored by the Division of Agricultural & Food Chemistry at the First Chemical Congress of the North American Continent, Mexico City, Mexico, on Dec. 3-4, 1975, include: Chemical modification of food products, by R. E. Feeney (pp. 3-36, 68 ref.); and Chemistry and biology of amino acids in food proteins: lysinoalanine, by E. Gross (pp. 37-51, 24 ref.). A further 7 papers are abstracted separately, and are in the FSTA author index under United States of America, American Chemical Society, Division of Agricultural & Food Chemistry [Protein Modification Symposium]. AL

ANALYSIS

107

Changes in official methods of analysis made at the eighty-ninth annual meeting, October 13-16, 1975.

[Book]

United States of America, Association of Official Analytical Chemists
Suppl. 2, 53pp. (1976) [En] Washington, DC, USA [Ass. of Official Analytical Chemists Inc., Box 540, Benjamin Franklin Sta., Washington, DC 20044, USA]

This 2nd supplement to the 12th edition of the Official methods of analysis of the Association of Official Analytical Chemists [FSTA (1975) 7 7A378 & 7A379] contains changes in official methods made at the 89th annual meeting. The changes became effective in spring 1976. This supplement is reprinted from the Journal of the Association of Official Analytical Chemists (1976) 59 (2) 454-506 [see FSTA (1976) 8 10A545]. JA

108

Determination of food carbohydrates. [Book] Southgate, D. A. T. ix + 178pp. ISBN 0-85334-693-3 (1976) [141 ref. En] Barking, Essex, UK; Applied Science Publishers Ltd. Price £10 [Dunn Nutr. Lab., Univ. of Cambridge, Cambridge, UK]

This book provides a guide to the analysis of the various carbohydrates in foods. It is intended primarily for food analysts and nutritionists. Chapters are: Introduction (pp. 1-6); The carbohydrates in foods (pp. 7-27); The measurement of sugars (pp. 28-47); The measurement of starch, its degradation products and modified starches (pp. 48-60); The measurement of unavailable carbohydrates: structural polysaccharides (pp. 61-74); The measurement of unavailable carbohydrates: non-structural polysaccharides (pp. 75-84); The analysis of carbohydrates in specific groups of foods (pp. 85-98); and Selected methods (pp. 99-144). Reference tables (pp. 145-166), bibliography and references, and an index are included. AL

109

What people eat. A laboratory manual. [Book] Raw, I. 69pp. (1976) [7 ref. En] Los Altos, California 94022, USA; William Kaufmann, Inc. [City Coll., New York, USA]

This guide, an experimental edition, intended for 1st year college or senior high school students with a limited laboratory knowledge, is a modified collection of experiments for the quantitative analysis of foods, but also suitable for use apart from the text part of the 'What people eat' project [see preceding abstr.]. It deals with: obtaining a dry sample; C and H₂ analysis; mol. wt. detn.; calorimetry; ash content; Fe photocolourimetry; dithizone test for Pb and Hg; Ca and Mg; lipids; saponification number; I number; titration; lipid chromatography; cholesterol; carbohydrates; carbohydrate chromatography; N; amino acids; vitamin C; and examining the adequacy of the diet. AL

110

[Analysis of organic impurities in drinking, natural and waste waters.] Opredelenie organicheskikh zagryaznenii pit' evykh, prirodnykh i stochnykh vod. [Book]

Leite, V. [Leithe, W.] 198pp. (1975) [Ru] Moscow, USSR; Khimiya Price 0.70r

The book is a Russian translation of the German original *Die Analyse der organischen Verunreinigungen in Trink-, Brauch-, und Abwässern*. [Wissenschaftliche Verlagsgesellschaft mbH Stuttgart (1972)]. It includes the following chapters: General introduction (pp. 15-27); General methods (pp. 27-33); Preparatory work (pp. 33-39); Organoleptic analysis (pp. 40-44); Methods for detn. of total organic compounds (pp. 45-94); Detn. of impurities by chromatographic

methods (pp. 95-104); Volatile fatty acids (pp. 105); Cyanides (pp. 106-117); Phenols (pp. 117-130); Detergents (pp. 130-141); Nitritotriacetic acid (pp. 142); Hydrocarbons (142-154); Volatile chlorinated hydrocarbons (pp. 155); Agrochemicals (pp. 156-171); Urea (pp. 172-173); Uric acid (pp. 174); Coprosterol (pp. 174-175); Urochromes (pp. 176-177); Humic acids (pp. 178); Lignin and lignosulphonic acids from wood pulp plants (pp. 179-182); and 3,4-Benzopyrene (pp. 182-183). STI

111

The chemical analysis of foods. [Book] Pearson, D. Ed. 7, xii + 575pp. ISBN 0-443-01411-6 (1976) [many ref. En] London, UK; Churchill Livingstone Price £13.50 [Nat. Coll. of Food Tech., Univ. of Reading, Weybridge, Surrey, UK]

This revised seventh edition gives details of methods for chemical analysis of foods under the headings: General methods (pp. 6-26); General methods for additives and contaminants (pp. 27-106); Sugar and preserves (pp. 107-157); Fruit and vegetable products (pp. 158-203); Cereals and flour (pp. 204-239); Starch products: baking powders: eggs: salad cream (pp. 240-263); Beverages and chocolate (pp. 264-288); Herbs and spices (pp. 289-323); Fermentation products (pp. 324-364); Flesh foods: table jellies (pp. 365-401); Dairy products I (pp. 402-451); Dairy products II (pp. 452-487); Oils and fats (pp. 488-518); and Miscellaneous (pp. 519-525). References are given at the end of each chapter. Appendices deal with: Preservatives in food regulations, 1975; Miscellaneous additives, including liquid freezants; Flavouring agents; Claims regarding vitamin and mineral contents; Energy calculations; Filters for spectrophotometry; Spectrophotometric data; Factors for volumetric analysis; SI system of units, metrication; and The emulsifiers and stabilisers in food regulations. A subject index is included. [See FSTA (1971) 3 7A294 for Ed. 6.] AL

112

Bacteriological analytical manual for foods. [Book] United States of America, Food & Drug Administration Ed. 4, v + 287pp. (1976) [En] Washington, DC 20044, USA; Association of Official Analytical Chemists Price \$10.00

These analytical methods, developed in laboratories of the US FDA, Bureau of Foods, Division of Microbiology, and published in a loose leaf manual, will provide Federal and State regulatory and industry control laboratories with effective means for qualitative and quantitative detection of microorganisms and certain of their metabolic products. The manual will be updated by supplements issued to users at no additional charge. Chapters are: Sampling and sample handling; Preparation of food sample homogenate; Microscopic examination of foods; Aerobic plate

count; Coliform organisms and *Escherichia coli*; Detection and identification of *Salmonella* and *Arizona*; Fluorescent antibody detection of salmonellae; *Shigella*; Isolation and identification of *Vibrio parahaemolyticus*; *Vibrio cholerae*; *Staphylococcus aureus*; Staphylococcal enterotoxins; Enterococci; *Clostridium botulinum*; *Clostridium perfringens*; *Bacillus cereus*; Enumeration of yeasts and moulds in foods; Examination of sterilized or microbiologically stable milk products; Direct microscopic examination of eggs; and Detection of penicillin and other microbial inhibitors in milk and milk products. Appendices deal with: culture media; reagents and diluents; stains and staining procedures; and MPN tables. AL

RESIDUES

113

[Pesticide residues in milk and meat products and methods for their determination.] Ostatki pestitsidov v molochnykh i myasnykh produktakh i metody ikh opredeleniya. [Book]
Molochnikov, V. V.; Shumkova, I. A.
222pp. (1975) [Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.66r

The book, intended for engineers and technologists working in the dairy and meat industries, analytical chemists, and those working in the fields of control, hygiene, and toxicology of food products, includes the following chapters: Properties of certain pesticides (pp. 8-18); Methods for detn. of pesticides in food products of animal origin (pp. 19-100); Sources of contamination of animal products with pesticides, metabolism of pesticides, and their localization in the animal (pp. 101-138); Levels of pesticide residues in products of animal origin (pp. 139-155); and Effects of technological processes in the production of meat and dairy products on pesticides present in raw materials (pp. 156-182). Two appendices are included: Appendix 1, Gas chromatographic and TLC methods for detn. of residues of organochlorine pesticides in milk and milk products (pp. 183-188); and Appendix 2, Methods for detn. of organochlorine pesticides in meat, meat products and animal fats (pp. 189-193). STI

QUALITY CONTROL

114

Steering group on food freshness. Final report. [Booklet]
United Kingdom, Ministry of Agriculture, Fisheries

& Food
SGFF/REP/2 48pp. ISBN 0-11-240833-8 (1976)
[En] London, UK; H. M. Stationery Office Price £0.65

This Final Report of the Steering Group on Food Freshness, deals with aspects of food freshness and any points outstanding from the Interim Report on open date marking, published in March 1975. This report reviews the following aspects of food freshness: Packaging (pp. 9-11); Temp. control [including open date marking of frozen foods and ice cream] (pp. 11-19); Distribution and stock control (pp. 19-23); Informative labelling (p. 23); Retailer education (pp. 23-24); and Open date marking of medium life foods (pp. 24-25). A summary of conclusions and recommendations resulting from considering the above aspects of food freshness is presented. 5 appendices are included: Organization from whom evidence and information has been received (pp. 31-34); Information received from a survey of local distribution temp. of quick frozen foods and from a survey of retail cabinet temp. (pp. 35-36); Survey of chill display cabinets and refrigerated storage on retail premises in England and Wales (Dec. 1973-Feb. 1974 (pp. 37-45); Temp. of meat products in transport - extract from a survey by the Meat Research Institute - Summer 1971 (p. 46); and Temp. control in other countries (pp. 47-48). VJG

115

[Detectors of metallic particles in the food industry.] Metalloobnaruzhiteli v pishchevoi promyshlennosti. [Book]
Porozov, V. A.
85pp. (1975) [Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.29r

This book, intended for specialists in food quality control, especially for those working in the meat, dairy and fish processing industries, includes the following chapters: Basic principles of detection of metallic particles in food products (pp. 5-23); Methods of detecting metallic particles in food products (pp. 24-29); Detectors of metals (pp. 29-35); Sensors (pp. 36-55); Apparatus (pp. 56-65); Methods of removal of metallic particles from food products (pp. 66-68); Assembly, adjustment and use of detectors (pp. 69-74); and Experimental checking of basic theoretical principles (pp. 75-83). STI

116

Food quality assurance. [Book]
Gould, W. A.
vii + 314pp. ISBN 0-87055-219-8 (1977) [many ref. En] Westport, Connecticut, USA; AVI Publishing Company, Inc. Price \$22.00 (US) \$23.00 (Foreign) [Dep. of Hort., Ohio State Univ., Columbus, Ohio, USA]

Each chapter in this manual covers basic information on the major food quality attributes with specific methods and evaluation procedures. Chapters are: Introduction to quality control, evaluation and assurance (pp. 1-25); Samples and

sampling and interpretation of data (pp. 26-57, 1 ref.); Container evaluation (pp. 58-74); Brines, syrups, and specific gravity (pp. 75-92, 10 ref.); Flavor (pp. 93-118, 11 ref.); Odor (pp. 119-138, 8 ref.); Physical evaluation of color (pp. 139-180, 14 ref.); Size, shape, symmetry, and style (pp. 181-195, 2 ref.); Maturity/character and total solids/moisture (specific gravity) (pp. 196-212, 14 ref.); Texture - tenderness, crispness, firmness (pp. 213-224, 11 ref.); Rheology - viscosity - consistency (pp. 225-242, 11 ref.); Defects - imperfections or appearance (pp. 243-249); Drosophila and insect control (pp. 250-261, 14 ref.); Enzyme activity (pp. 262-269, 5 ref.); Total acidity and pH (pp. 270-282, 5 ref.); and Mould-counting methods and principles (pp. 283-307, 17 ref.). AL

117

Flavor quality: objective measurement.

[Conference proceedings]

Scanlan, R. A. United States of America, American Chemical Society (Editor)
ix + 117pp. ISBN 0-8412-0378-4 (1977) [many ref. En] Washington, DC, USA Price \$14.50

Papers presented at the symposium sponsored by the Division of Agricultural and Food Chemistry at the 172nd Meeting of the American Chemical Society, held in San Francisco, California on Sept. 1, 1976 were: Objective measurements of flavor quality: general approaches, problems, pitfalls, and accomplishments, by W. G. Jennings (pp. 1-10, 66 ref.); Correlation of odor intensities and vapor pressures with structural properties of odorants, by A. Dravnieks (pp. 11-28, 11 ref.); Flavor chemical mixtures - psychophysical analysis, by H. R. Moskowitz, C. N. Dubose & M. J. Reuben (pp. 29-44, 29 ref.); Structural and mechanical indicators of flavor quality, by Z. Vickers (pp. 45-50, 11 ref.); Relations between sensory and objective measurements for quality evaluation of green beans, by J. J. Powers, R. E. Bargmann & D. R. Godwin (pp. 51-70, 54 ref.); Measurement of flavor quality in apples, apple juices, and fermented ciders, by A. A. Williams, A. G. H. Lea & C. F.

Timberlake (pp. 71-88, 33 ref.); Objective measurements of the flavor quality of beer, by R. C. Lindsay (pp. 89-103, 43 ref.); and Use of regression models in objective flavor evaluation of processed orange juice during four seasons, by R. D. Carter & J. A. Cornell (pp. 104-109, 14 ref.). An index is included. This publication is No 51 in the ACS Symposium Series. AL

PHYSICAL PROPERTIES

118

Rheology and texture in food quality. [Book]
DeMan, J. M.; Voisey, P. W.; Rasper, V. F.; Stanley, D. W. (Editors)

ix + 588pp. ISBN 0-87055-197-3 (1976) [many ref. En] Westport, Connecticut, USA; AVI Publishing Co. Inc. [Ontario Agric. Coll., Univ. of Guelph, Ontario, Canada]

The purpose of this book is to give an up-to-date account of present knowledge in the area of food rheology and texture. It contains the following chapters: How far can studies of food texture be "scientific"? by G. W. Scott Blair (pp. 1-7, 15 ref.); Mechanical properties of foods, by J. M. DeMan (pp. 8-27, 13 ref.); Microstructure of food and its relation to texture, by D. W. Stanley & M. A. Tung (pp. 28-78, 89 ref.); Instrumental measurement of food texture, by P. W. Voisey (pp. 79-141, many ref.); Applications of instruments for measuring food texture, by P. W. Voisey & J. M. DeMan (pp. 142-243, many ref.); Interpretation of force curves from instrumental texture measurements, by M. C. Bourne (pp. 244-274, 40 ref.); Texture of fruits and vegetables, by M. C. Bourne (pp. 275-307, 102 ref.); Texture of dough, pasta and baked products, by V. F. Rasper (pp. 308-354, many ref.); Texture of fats and fat products, by J. M. DeMan (pp. 355-381, 33 ref.); The textural characteristics of dairy products, by P. Sherman (pp. 382-404, 63 ref.); [continued in following abstr.]. JA

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Rheology and texture in food quality [Book]

DeMan, J. M.; Voisey, P. W.; Rasper, V. F.; Stanley, D. W. (Editors)
ix + 588pp. ISBN 0-87055-197-3 (1976) [many ref. En] Westport, Connecticut, USA; AVI Publishing Co. Inc. [Ontario Agric. Coll., Univ. of Guelph, Ontario, Canada]

[Continued from preceding abstr.] The texture of meat and its measurement, by D. W. Stanley (pp. 405-426, 58 ref.); Starch texture, by L. H. Kruger & R. Murray (pp. 427-444, 7 ref.); Rheology of chocolate, by J. Kleinert (pp. 445-473, 11 ref.); "Engineering" food texture, by W. E. Hartman (pp. 474-486, 13 ref.); Textural characteristics of food emulsions, by P. Sherman (pp. 487-506, 30 ref.); Functions of emulsifiers in relation to food texture, by N. Krog (pp. 507-534, 44 ref.); Sensory measurement of food texture, by E. Larmond (pp. 535-545, 19 ref.); The texture profile, by E. Larmond (pp. 546-553, 12 ref.); and Psychophysical relations in texture, by H. E. Moskowitz & J. G. Kapsalis (pp. 554-581, 34 ref.). A subject index is included. JA

120

Principles of food science. Part II. Physical principles of food preservation. [Book]
Karel, M.; Fennema, O. R.; Lund, D. B.
viii + 474pp. ISBN 0-8247-6322-X (1975) [many ref. En] New York, USA; Marcel Dekker, Inc. Price \$39.50 [Dep. of Nutr. & Food Sci., Massachusetts Inst. of Tech., Cambridge, Massachusetts, USA]

This book, which is part II of volume IV of the Food Science Monograph series, is primarily intended for undergraduates in food science and

graduate students entering food science from other disciplines. It should be of use to persons in the food industry and for scientists in food-related groups of the government. Chapters included are:

Introduction to food preservation, by O. Fennema (pp. 1-8, 20 ref.); Heat transfer in foods, by D. Lund (pp. 11-30, 17 ref.); Heat processing, by D. Lund (pp. 31-92, 81 ref.); Radiation preservation of foods, by M. Karel (pp. 93-130, 20 ref.); Preservation of food by storage at chilling temperatures, by O. Fennema (pp. 133-171, 108 ref.); Freezing preservation (pp. 173-215, 103 ref.); Equilibrium and rate considerations in processes for food concentration and dehydration, by M. Karel (pp. 219-236, 6 ref.); Water activity and food preservation, by M. Karel (pp. 237-263, 43 ref.); Concentration of foods, by M. Karel (pp. 265-308, 30 ref.); Dehydration of foods (pp. 309-357, 49 ref.); Freeze dehydration of foods, by M. Karel (pp. 359-395, 50 ref.); and Protective packaging of foods, by M. Karel (pp. 399-466, 46 ref.). VJG

MICROBIOLOGY

121

Mycotoxins and the other fungal related food problems. [Conference proceedings]

Rodricks, J. V. (United States of America, American Chemical Society, Division of Agricultural & Food Chemistry) (Editor) *Advances in Chemistry Series* 149, xi + 409pp. ISBN 0-8412-0222-2 (1976) [many ref. En] Washington, DC, USA

Full version are given of the 18 papers presented at this symposium, sponsored by the Division of Agricultural and Food Chemistry at the 168th Meeting of the American Chemical Society in Atlanta City, New Jersey on 11-13 Sept. 1974. Abstracts of 8 papers have already been covered by FSTA: Conditions leading to mycotoxin contamination of foods and feeds, by C. W. Hesseltine (pp. 1-22, 33 ref.; FSTA (1975) 7 1C16); Occurrence of mycotoxins in foods and feeds, by L. Stoloff (pp. 23-50, 152 ref.; FSTA (1975) 7 1C17); The role of aflatoxin in human disease, by R. C. Shank (pp. 51-57, 22 ref.; FSTA (1975) 7 1C18); Chemical methods investigated for detoxifying aflatoxins in foods and feeds, by A. C. Beckwith, R. F. Vesonder & A. Ciegler (pp. 58-67, 37 ref.; FSTA (1975) 7 1C19); *Aspergillus* toxins other than aflatoxins, by R. J. Cole (pp. 68-89, 96 ref.; FSTA (1975) 7 1C22); Patulin and penicillic acid, by D. M. Wilson (pp. 90-109, 163 ref.; FSTA (1975) 7 1C23); Stress metabolites of white potatoes, by G. E. Wood (pp. 369-386, 87 ref.; FSTA (1975) 7 1J47); and Toxic furanosesquiterpenoids from mold-damaged sweet potatoes (*Ipomoea batatas*), by L. T. Burka & B. J. Wilson (pp. 387-399, 48 ref.; FSTA (1975) 7 1J49). Other papers presented included: Chemical and biochemical studies of the trichothecene mycotoxins, by R. J. Bamburg (pp. 144-162, 66 ref.); [continued in following abstr.].

Al

122

Mycotoxins and other fungal related food problems. [Conference proceedings]

Rodricks, J. V. (United States of America, American Chemical Society, Division of Agricultural & Food Chemistry) (Editor) *Advances in Chemistry Series* 149, xi + 409pp. ISBN 0-8412-0222-2 (1976) [many ref. En] Washington, DC, USA

[Continued from preceding abstr.] Zearalenone and related compounds, by S. V. Pathre & C. J. Mirocha (pp. 178-227, 85 ref.); The chemistry of the epipolythiopiperazine-3,6-diones, by C. Leigh & A. Taylor (pp. 228-285, 139 ref.); Phytopathogenic toxins from fungi: an overview, by H. H. Luke & R. H. Biggs (pp. 296-317, 99 ref.); *Helminthosporium*, *Drechslera*, and *Bipolaris* toxins, by O. L. Shotwell & J. J. Ellis (pp. 318-343, 86 ref.); and The structure and toxicity of the *Alternaria* metabolites, by D. J. Harvan & R. W. Pero (pp. 344-355, 74 ref.). A further 4 papers are abstracted separately and can be found via the author index under United States of America, American Chemical Society, Division of Agricultural & Food Chemistry [Mycotoxins Symposium]. AL

123

Laboratory methods in food and dairy microbiology. [Book]

Harrigan, W. F.; McCance, M. E. xii + 452pp. ISBN 0-12-326040-X (1976) [many ref. En] London, UK; Academic Press Inc. (London) Ltd. Price £9.20 [Dep. of Food Sci., Reading Univ., Reading, UK]

This revised edition of *Laboratory Methods in Microbiology* (published in 1966) has been extensively reorganized and updated, especially the sections on counting methods, interpretation of counts, techniques for selective isolation and the identification schemes for bacteria and fungi. The book, written with a view to being used for daily bench-top reference, provides adequate information for the assessment of the microbiological quality of foodstuffs or of equipment in the majority of quality control situations. ADL

124

[Methods of microbiological analysis of foods and beverages. Recommended standards. (Manual of practice).] *Methods de examen microbiológico para alimentos y bebidas. Normas recomendadas. (Manual practico).* [Book]

Spain, Centro Nacional de Alimentacion y Nutricion 59pp. (1976) [23 ref. Es] Madrid, Spain Price 1500 Pesetas

This manual of recommended standard methods of the National Centre for Food and Nutrition for microbiological examination of foods covers the following aspects: sampling; preincubation; preparation of the samples for testing; preparation of decimal dilutions; and methods for detn. and

identification of aerobic microorganisms, spores of aerobic organisms, psychrotrophs, yeasts + moulds, Enterobacteriaceae, coliforms, *Salmonella* spp., *Arizona* spp., *Shigella* spp., *Staphylococcus aureus*, Group D streptococci, *Bacillus cereus*, anaerobic microorganisms, sulphite-reducing clostridia, *Clostridium perfringens*, *Cl. botulinum*, proteolytic organisms, lipolytic organisms, and *Pseudomonas aeruginosa*. Appendices cover microbiological examination of canned and semi-preserved products. AJDW

125

Food microbiology: public health and spoilage aspects. [Book]

Defigueiredo, M. P.; Splittstoesser, D. F. (Editors) ix + 492pp. ISBN 0-87055-209-0 (1976) [many ref. En] Westport, Connecticut, USA; AVI Publishing Co. Inc. Price \$35.00 (US), \$36.00 (Foreign) [Nat. Portion Control, Chicago, Illinois, USA]

The objective of this book is to provide information on microorganisms causing food poisoning or spoilage. Special emphasis is placed on the habitats of the organisms, bases for their recognition, and factors affecting their growth and death in foods. Chapters are: Statistics in microbiological control, by F. R. Smith (pp. 1-11, 9 ref.); *Staphylococcus aureus*, by F. L. Bryan (pp. 12-128, many ref.); *Salmonella* and *Shigella*, by J. A. Troller (pp. 129-155, 38 ref.); *Clostridium botulinum*, by R. B. Tompkin & L. N. Christiansen (pp. 156-169, 38 ref.); *Clostridium perfringens*, by C. L. Duncan (pp. 170-197, 56 ref.); *Vibrio parahaemolyticus*, by J. Liston (pp. 198-209, 16 ref.); Toxigenic fungi, by E. H. Marth & B. G. Calanog (pp. 210-256, many ref.); Viruses, by D. O. Cliver (pp. 257-270, 32 ref.); Coliforms, enterococci and other microbial indicators, by M. P. Defigueiredo & J. M. Jay (pp. 271-297, many ref.); Gram-positive nonspore-forming rods, by A. A. Kraft (pp. 298-336, 99 ref.); Gram-negative nonspore-forming rods, by D. F. Splittstoesser (pp. 337-355, 54 ref.); Aerobic and anaerobic spore-forming bacteria and food spoilage, by H. W. Walker (pp. 356-386, many ref.); Micrococci, by H. B. Naylor (pp. 387-403, 37 ref.); Lactic acid bacteria, by J. R. Stamer (pp. 404-426, 72 ref.); Yeasts, by H. J. Peppler (pp. 427-454, many ref.); and Moulds, by D. F. Splittstoesser & D. B. Prest (pp. 455-479, 64 ref.). JA

126

Microbiological methods. [Book]

Collins, C. H.; Lyne, P. M. Ed. 4, 521pp. ISBN 0-408-70716-X (1976) [many ref. En] London, UK; Butterworth & Co. Ltd. Price £9.50 [Public Health Lab. Service, Dulwich, London, UK]

This 4th edition of the book first published in 1964 (3rd edition published in 1970) has been revised and rearranged and is confined to technical methods for the culture and identification of

bacteria and fungi of importance in medicine, public health, veterinary practice and the food industry. Previous editions have reported only those methods used in the UK but this edition includes some techniques used in the USA. Chapters are: Prevention of laboratory-acquired infection (pp. 1-48, 75 ref.); Microbiological laboratory equipment (pp. 49-68); Sterilisation and disinfection by physical methods, by V. G. Adler (pp. 69-91, 15 ref.); Disinfectants and antiseptics, by V. G. Alder (pp. 92-103, 18 ref.); Mechanical methods of killing bacteria, by V. G. Adler (pp. 104-105, 5 ref.); Microscopic examination of microorganisms (pp. 106-112, 3 ref.); Culture media (pp. 113-158, 43 ref.); Cultural methods (pp. 159-168, 3 ref.); Biochemical methods (pp. 169-180, 6 ref.); Mycological methods, by A. G. Proctor (pp. 181-193); Estimating bacterial numbers (pp. 194-210, 7 ref.); Agglutination tests (pp. 211-214); Complement fixation tests, by C. E. D. Taylor (pp. 215-225, 2 ref.); Fluorescent antibody techniques, by A. Cremer (pp. 226-234, 10 ref.); Antibiotic sensitivity and assay tests, by A. Cremer (pp. 235-249, 11 ref.); Examination of clinical material, by J. D. Jarvis (pp. 250-261); Food microbiology (pp. 262-304, 25 ref.); Bacterial food poisoning (pp. 305-311, 6 ref.); [continued in following abstr.]. JA

127

Microbiological methods. [Book]

Collins, C. H.; Lyne, P. M. Ed. 4, 521pp. ISBN 0-408-70716-X (1976) [many ref. En] London, UK; Butterworth & Co. Ltd. Price £9.50 [Public Health Lab. Service, Dulwich, London, UK]

[Continued from preceding abstr.] Sanitation control (pp. 312-317, 14 ref.); Water microbiology (pp. 318-325, 5 ref.); The Gram-negative non-spore-forming rods: 1. *Pseudomonas*, *Aeromonas*, *Acinetobacter*, *Alcaligenes*, *Achromobacter*, *Flavobacterium*, *Chromobacterium* and *Acetobacter* (pp. 326-340, 29 ref.); The Gram-negative non-spore-forming rods: 2. *Vibrios*, by A. L. Furniss & T. J. Donovan (pp. 341-348, 17 ref.); The Gram-negative non-spore-forming rods: 3. *Enterobacteria* (pp. 349-380, 14 ref.); The Gram-negative non-spore-forming rods: 4. *Brucella*, *Haemophilus*, *Moraxella*, *Bordetella*, *Actinobacillus*, *Yersinia*, *Pasteurella*, *Francisella* and *Bacteroides* (pp. 381-396, 17 ref.); The Gram-negative cocci: *Neisseria* and *Veillonella* (pp. 397-400, 3 ref.); The Gram-positive cocci: *Staphylococcus*, *Micrococcus*, *Streptococcus*, *Aerococcus*, *Leuconostoc* and *Pediococcus* (pp. 401-418, 18 ref.); The Gram-positive non-spore-forming rods: *Corynebacterium*, *Propionibacterium*, *Brevibacterium*, *Erysipelothrix*, *Listeria*, *Lactobacillus* and *Bifidobacterium* (pp. 419-433, 19 ref.); The Gram-positive spore-bearers: *Bacillus* and *Clostridium* (pp. 434-448, 6 ref.); Mycobacteria (pp. 449-471, 18 ref.); Actinomyces, *Nocardia* and *Streptomyces* (pp. 472-476, 1 ref.); The yeasts, by A. G. Proctor (pp. 477-481, 3 ref.); The moulds, by A. G. Proctor (pp. 482-488, 2 ref.); and Pathogenic fungi, by A. G. Proctor (pp. 489-

499). An appendix (pp. 501-509) lists the names and addresses of companies supplying apparatus mentioned in the text. A subject index is included. JA

128

Botulism. The organism, its toxins, the disease.

[Book]

Smith, L. D.

xiii + 236pp. ISBN 0-398-03543-1 (1977) [many ref. En] Springfield, Illinois, USA; Charles C. Thomas Price \$18.75 [Cent. for Disease Control, US Public Health Service, Atlanta, Georgia, USA]

This well-presented book, Publication No. 997 in the American Lecture Series, is a monograph in the Bannerstone division of American lectures in clinical microbiology, edited by A. Balows. It is intended for microbiologists, public health officials, food scientists, and all concerned with the occurrence of botulism. The chapters are: Introduction and history (pp. 3-14, 23 ref.); The organism (pp. 15-33, 52 ref.); The spores (pp. 34-63, 94 ref.); Bacteriophages, bacteriocins, and bacteriolysins (pp. 64-71, 27 ref.); Demonstration and isolation (pp. 72-90, 45 ref.); The occurrence of *Clostridium botulinum* (pp. 91-112, many ref.); The toxins of *Clostridium botulinum* (pp. 113-141, many ref.); The action of the toxins (pp. 142-151, 46 ref.); Botulinum toxoids (pp. 152-156, 12 ref.); Botulism in man - its occurrence (pp. 157-176, 29 ref.); Botulism in man - the disease (pp. 177-193, 51 ref.); Botulism in animals (pp. 194-214, 76 ref.); and Botulism in birds (pp. 215-230, 43 ref.). A 6-pp. subject index is included. DIH

ENZYMES

129

Topics in enzyme and fermentation biotechnology.

1. [Book]

Wiseman, A. (Editor)

191pp. ISBN 85312-051-X (Ellis Horwood) & ISBN 0-470-98896-7 (Halsted Press) (1977) [many ref. En] Chichester, UK; Ellis Horwood Ltd. & New York, USA; Halsted Press Price £10.50 [Dep. of Biochem., Univ. of Surrey, Guildford, Surrey, UK]

This publication, the foundation volume in a new 'open-ended' series, surveys the important areas of current interest and development in the manufacture and use of enzymes and other proteins by fermentation procedures using microorganisms. Contents are: Regulation of enzyme synthesis in continuous culture, by J. Melling (pp. 10-42, 103 ref.); Foam separation of biological materials, by A. Thomas & M. A. Winkler (pp. 43-71, 75 ref.); Aeration of mould and streptomycete culture fluids, by G. T. Banks (pp. 72-110, 63 ref.); Enzymic

alterations of penicillins and cephalosporins, by M. O. Moss (pp. 111-131, 87 ref.); Patenting developments with microorganisms and their products, by F. S. M. Grylls (pp. 132-146); Industrial glucose isomerase, by C. Bucke (pp. 147-171, 94 ref.); and Microbial cytochromes P-450: drug applications, by A. Wiseman (pp. 172-184, 54 ref.). JA

130

Immobilized enzymes. Preparation and engineering techniques. [Book]

Gutcho, S. J.

Chemical Technology Review No. 39, viii + 198pp. ISBN 0-8155-0553-1 (1974) [En] Park Ridge, New Jersey, USA; Noyes Data Corp. Price \$36.00

This book is based on recent US patents relating to the immobilization of enzymes. Information is arranged under the following headings: Covalent attachment (pp. 3-108) including activated polysaccharides as supports, synthetic polymers as supports, inorganic carriers as supports, and copolymerization; Cross-linking (pp. 109-132); Physical techniques (pp. 133-173) including exchange onto resin supports, entrapment, and microencapsulation; Enzyme reactors (pp. 174-185); and Applications (pp. 186-193). Company, inventor and US patent number indexes are included. VJG

131

Microbial enzyme production. [Book]

Gutcho, S. J.

Chemical Technology Review No. 28, x + 272pp. ISBN 0-8155-0532-9 (1974) [En] Park Ridge, New Jersey, USA; Noyes Data Corp. Price \$36.00

This book is based on US patents since the early 1960s relating to the industrial production of enzymes using microorganisms. Information is arranged under the following headings: Bacterial enzymes (pp. 3-105) including α -amylase, asparaginase, catalase, collagenase, dextranase, glucose isomerase, α -1,6-glucosidase, glutaminase and asparaginase, hyaluronidase, 3-ketosteroid- Δ -dehydrogenase, lipase, lytic enzymes, methionine decarboxylase, neuraminidase, nitrogenase, nuclease, penicillin amidase, polynucleotide phosphorylase, proteolytic enzymes, streptokinase and streptodornase, and sucrase; Fungal enzymes (pp. 106-208) including acylase, α -amylase, amyloglucosidase, aminopeptidase, cellulase, chlorogenicase, dextranase, galactose oxidase, glucose oxidase, keratinase, lactase, lipase, milk clotting enzyme (microbial rennet), pectolytic enzyme, phytase, proteolytic enzymes, and ribonuclease; Yeast enzymes (pp. 209-221) including invertase, lipase, lactase and uricase; and Special techniques (pp. 222-264). Company, inventor and US patent number indexes are included. VJG

132

[Enzyme preparation in the food industry.]

Fermentnye preparaty v pishchevoi promyshlennosti. [Book]

Kretovich, V. L.; Yarovenko, V. L.; Mikeladze, V. M.; Tokareva, R. R.; Livshits, D. B.; Salmanova, L. S.; Datunashvili, E. N.; Vedernikova, E. I.

335pp. (1975) [618 ref. Ru] Moscow, USSR;

Pishchevaya Promyshlennost'. Price 1.76r

The following chapters are included: Application of enzyme preparations in the baking industry (pp. 7-103); Application of enzyme preparations in the confectionery industry (pp. 103-143); Application of enzyme preparations in the production of fruit juices, wine and soft drinks (pp. 143-225); Application of enzyme preparations in grape wine manufacture (pp. 225-307); Application of enzyme preparations in brewing (pp. 307-412); and Application of enzyme preparations in alcohol production (pp. 412-527). STI

HYGIENE AND SANITATION

133

Industrial hygiene. [Book]

Allen, R. W.; Ells, M. D.; Hart, A. W.

xvii + 363pp. ISBN 0-13-461202-7 (1976) [many ref. En] Englewood Cliffs, New Jersey, USA;

Prentice-Hall Inc. Price £11.65 [Ferris State Coll., Big Rapids, Michigan 49307, USA]

This book is intended to serve both as an introductory textbook for students of industrial hygiene and as a reference book for manufacturers, public service organizations and government agencies. Particular emphasis is given to information of practical use. Industrial hygiene is broadly concerned with the chemical and physical stresses which may impair the health and well-being of workers. The book contains the following chapters: Industrial hygiene: general considerations (pp. 1-6); Safety training and investigating programs (pp. 7-35); Air contaminants (pp. 36-86); Nonionizing radiation (pp. 87-114); Ionizing radiation (pp. 115-153); Light (pp. 154-178); Heat (pp. 179-205); Noise (pp. 206-239); Microbiological hazards (pp. 240-292); and Ventilation (pp. 293-318). An appendix contains the following sections: Pre-employment and follow-up physical examinations (pp. 319-330); Note on industrial medical facilities (pp. 330-331); Basic principles for treating exposure to hazardous chemicals (pp. 331-335); The Occupational Safety and Health Act: a summary (pp. 335-349); Organizations and agencies [in the USA] concerned with industrial hygiene (pp. 349-352); and Selected bibliography (pp. 352-356). A subject index is included. JA

134

Food store sanitation. A profit protection program.

[Book]

Rishoi, D. C.

xvii + 302pp. ISBN 0-912016-38-8 (1976) [42

ref. En] New York, USA; Chain Store Publishing Corp. Price \$15.95

This book discusses the sanitation of food stores and demonstrates how effective sanitation can be achieved without huge investments in new equipment. It should serve as a valuable handbook in everyday sanitation procedures and practices. Chapters are: Introduction to store sanitation (pp. 1-11); The economics of sanitation: how sanitation affects profits (pp. 12-39); Principles of microbiology (invisible germs) (pp. 40-60); Personal hygiene and work habits (pp. 61-69); Principles of cleaning and sanitizing (pp. 70-94); Construction and maintenance of facilities and equipment (pp. 95-113); Rodent and insect control (pp. 114-133); Educating the customer (pp. 134-141); You and the law - past, present, and future (pp. 142-156); Departmental sanitation (pp. 157-229), which discusses sanitation in the following sections of a food store: meat, produce (fruit and vegetables), delicatessen, seafood, bakery, dairy, frozen food, grocery; and Designing, implementing, and managing a company sanitation program (pp. 230-251). An appendix gives the Retail Food Market Code (1973) of the Association of Food and Drug Officials of the United States (pp. 253-274) and 'Rules and regulations relative to retail food establishments' of the Massachusetts Department of Public Health (Division of Food and Drugs) (pp. 275-290). A bibliography and subject index are included. JA

135

[Fungal contamination of food.] Le contaminazioni fungine degli alimenti. [Book]

Cirilli, G.

175pp. (1976) [93 ref. It] Pinerolo, Italy;

Chirioti Editori Price L10 000

This well-illustrated account of fungal contamination of foods contains the following chapters: Basic aspects of mycology and the biology of fungi (pp. 13-38); Culture methods and toxicity tests (pp. 39-53); Mycotoxins (pp. 55-65);

Toxigenic fungi (pp. 67-107); Methods for detection and detn. of mycotoxins (pp. 109-124); Symptoms of mycotoxicoses in animals (pp. 125-140); Fungal contamination of various foods (pp. 141-158); Prevention and control of fungal contamination (pp. 159-166); and Yeasts as a source of protein: *Toprina* (pp. 167-172). AJDW

136

Food hygiene and food hazards. [Book]

Christie, A. B.; Christie, M. C.

Ed. 2, 232pp. ISBN 0-571-10902-0 (paperback),

ISBN 0-571-04949-4 (hardback) (1977) [23 ref.

En] London, UK; Faber & Faber Price £2.50

(paperback), £4.95 (hardback)

This 2nd edition of the book, first published in 1971, has been revised and extended. The aim of the book is to explain in simple language how food becomes contaminated and how food poisoning can be avoided. It is hoped that the book will appeal to a wide range of readers. Chapters are: The fight for food (pp. 15-18); A day in the life of a germ (pp. 19-25); Food-poisoning germs (pp. 26-43); Food poisoning and botulism: clinical aspects (pp. 44-48); The trail of infection - infection on the farm (pp. 49-52); The trail of infection - animals on the move (pp. 53-56); The trail of infection - from abattoir to factory (pp. 57-63); The end of the trail - bakehouse, kitchen and the home (pp. 64-75); Other forms of food poisoning (pp. 76-79); Other diseases spread by food (pp. 80-84); The water we drink and the air we breathe (pp. 85-90); A look at the menu - hors-d'oeuvre to the main course (pp. 93-100); A look at the menu - sweets and cheese (pp. 101-118); Reflections on some plats du jour (pp. 119-121); Food hygiene: the problems (pp. 125-127); Food hygiene: from farm to factory (pp. 128-134); Food hygiene: the food factory (pp. 135-141); Food hygiene: shops (pp. 142-148); Food hygiene: the kitchen (pp. 149-156); The food handler (pp. 157-163); The preservation of food (pp. 164-179); Housewife and customer (pp. 180-186); Food and travel (pp. 187-191); Food-borne outbreaks (pp. 192-217); and Past, present and future (pp. 218-219). JA

137

Environmental Health Criteria. I. Mercury. [Book]
World Health Organization
Environmental Health Criteria No. 1, 132pp.
ISBN 92-4-154061-3 (1976) [many ref. En]
Geneva, Switzerland

One of the objectives of the WHO Environmental Health Criteria Programme was to compile, review and evaluate available information on the biological effects of pollutants and other environmental factors which may affect man's health. This book is the 1st of a series of publications on this theme. It opens with a summary which highlights the major issues and is followed by recommendations for further research. Subsequent chapters consider chemical and physical properties of Hg and its compounds, and sampling procedures and analytical methods; sources of environmental pollution; environmental transport and distribution of Hg; environmental levels in air, water and food, and occupational exposures; the metabolism of Hg (including transplacental transfer and secretion in milk); experimental studies on its effects on animals; and epidemiological and clinical studies of its effect on man. The final chapter provides an evaluation by a group of experts of the health risks to man from exposure to Hg and gives guidelines on exposure and dose limits. An extensive bibliography of some 360 ref. is included. DMK

138

Environmental Health Criteria. II. Polychlorinated biphenyls and terphenyls. [Book]
World Health Organization
Environmental Health Criteria No. 2, 85pp. ISBN 92-4-154062-1 (1976) [many ref. En] Geneva, Switzerland

Sections in this vol. consider the chemical composition of polychlorinated biphenyls and terphenyls (PCBs and PCTs); detn. of residues; sources of environmental pollution; their transport and environmental levels in air, soil, water and living organisms, with particular reference to food chains; the extent of human exposure to PCBs and PCTs through food, occupational or other sources of exposure, and biological indices of human exposure (including human milk); the metabolism of PCBs and PCTs; experimental studies of their effects on animals; and epidemiological and chemical studies of their effects on man. The final chapter provides an evaluation of health risks to man through exposure to PCBs and PCTs. A bibliography of some 280 ref. is included. DMK

INDUSTRIES, STATISTICS, MANAGEMENT, ECONOMICS

139

Production yearbook: volume 29: 1975.
Food & Agriculture Organization
FAO Production Yearbook xxi + 555pp. (1975)
[En, Fr, Es] Rome, Italy

The yearbook, published this year in a single issue, contains annual world data on all important aspects of food and agriculture tabulated according to country and/or region, for one 5-yr average (1961-1965) and for 3 individual yr (1973-1975). It covers land, population, index numbers of agricultural and food production, data on individual crops, livestock numbers and products, means of production, etc. The long-term series in this issue covers vegetable and melon crops for 1964-1975. Data on average annual producer, wholesale, import and export prices of agricultural commodities for 1970-1974 in major producing countries are given, as well as index numbers of retail food prices in different countries for 1963-1974, based on 1970 = 100. [See FSTA (1976) 8 4D80 and 5D99 for 1974 yearbook.] AL

140

Agriculture in South Africa 1976. [Book]
Anon.
vii + 176pp. (1976) [En] Johannesburg, South Africa; Chris van Rensburg Publications (Pty) Ltd.

This lavishly produced book, which contains approx. 150 colour photographs, gives a comprehensive review of many aspects of the

agricultural industries in South Africa, including foods and beverages. Numerous tables give production, consumption, import and export data for a wide variety of products. Chapters are: Introduction (pp. 1-6); The agricultural scene (pp. 7-16); Organisation of agriculture (pp. 17-22); Development and progress (pp. 23-42); Agricultural production (pp. 43-154); Agricultural engineering (pp. 155-163); Quality control and grading (pp. 164-168); and The consumer aspect (pp. 169-175). The book is also available in Afrikaans under the title *Landbou in Suid-Afrika*. JA

141

International distribution of beef and lamb products. [Booklet]

Bradley, M. F.

x + 112pp. ISBN 0-901317-79-9 (1975) [32 ref. En] Dublin, Irish Republic; An Foras Taluntais Price £1.50

This study (No. 18 in the Economic Research Series) on international transport and distribution of beef and lamb (with special reference to exports from the Republic of Ireland) includes the following chapters: Research objectives (pp. 3-5); Transportation and agricultural trade (pp. 6-23); Supply, demand and transportation costs (pp. 24-31); Development of cost of service transportation rates (pp. 32-55); Effect of cost of service transportation rate structure on the distribution of beef and lamb (pp. 56-70); an exporter owned and operated distribution system (pp. 71-81); and Conclusions (pp. 82-85). An appendix (pp. 89-112) gives tables and graphs of data for exports, costs, required transport distances, etc. AJDW

142

Systems analysis for the food industry. [Book]

Bender, F. E.; Kramer, A.; Kahan, G.

ix + 468pp. ISBN 0-87055-208-2 (1976) [many ref. En] Westport, Connecticut, USA; AVI Publishing Co. Inc. [Dep. of Agric. & Resource Economics, Univ. of Maryland, College Park, Maryland, USA]

Systems analysis is essentially operations research techniques applied to management decision-making for the food industry. This book, which is aimed at food managers, technologists and students, presents techniques and methods to solve problems involving the operation of food manufacturing or production systems, together with numerous examples. Chapters are: Systems analysis and operations research (pp. 1-5); Applications of linear programming - I (pp. 6-45, 5 ref.) and II (pp. 46-94, 9 ref.); Integer programming (pp. 95-120, 5 ref.); Response surface techniques (pp. 121-193, 25 ref.); Production control (pp. 194-235, 17 ref.); Inventory control and budgeting (pp. 236-288, 12 ref.); Transportation optimization (pp. 289-352, 10 ref.); Research and development management (pp. 353-372, 5 ref.); Break-even analysis (pp. 373-396, 4 ref.); Sales forecasting (pp. 397-414, 15 ref.); Game theory (pp. 415-439, 7 ref.); and

Applications of linear programming - III (pp. 440-451, 13 ref.). A glossary of symbols and terms (pp. 452-464) is included. AL

143

Futures for physical distribution in the food industry. [Book]

Walters, D.

viii + 156pp. ISBN 0-347-01116-0 (1976) [many ref. En] Farnborough, Hants. UK; Saxon House, D. C. Heath Ltd. Price £5.75. Lexington, Massachusetts, USA; Lexington Books, D. C. Heath & Co. Price \$12.95

This book is based on the results of research carried out in 1971-1973. The Delphi technique was used for forecasting. Chapters are: The development of physical distribution management (pp. 1-14, 16 ref.); Physical distribution management in grocery product manufacturing and retailing - the state of the art in 1972 (pp. 15-36); Changes in the retailing environment and their logistics implications 1960-70 (pp. 37-65, 18 ref.); Forecasting logistics and retailing changes (pp. 66-72, 1 ref.); The logistics implications of future changes in grocery retailing (pp. 73-127, 7 ref.); and Recent problems - 1973-1975 (pp. 128-135, 1 ref.). An appendix (pp. 136-151) gives definitions and tabulated results of the Delphi exercise. AL

144

[Dairy industry economics.] *Ekonomika molochno promyshlennosti.* [Book]

Sterligov, B. I.

398pp. (1976) [Ru] Moscow, USSR; Pishchevaya Promyshlennost. Price 1.05r

The role of the dairy industry in the national economy of the USSR is discussed as well as development trends, under the following chapter headings: Dairy industry in the USSR economy (pp. 8-22); Organization of dairy industry management (pp. 23-43); Raw material supplies (pp. 44-61); Progress in dairy industry techniques (pp. 62-98); Production programme (pp. 99-125); Forms of commercial production organization (pp. 126-148); Distribution of dairy industry (pp. 149-165); Investments (pp. 166-184); Basic funds (pp. 185-216); circulating capital (pp. 217-235); Supplies of material (pp. 236-250); Labour productivity and personnel (pp. 251-279); Wages (pp. 280-299); Costs (pp. 300-326); Production costs, profit and profitability (pp. 327-345); Economics and economic stimulation system (pp. 346-358); and Financing and credit in dairy industry (pp. 359-381). STI

145

The new food and beverage products market in Europe. [Book]

Anon.

428pp. (1977) [En] New York, USA; Frost & Sullivan, Inc. Price \$700

This market research report covers the European food and beverage market, with emphasis on the

UK, Federal Republic of Germany, France and Italy. A section on the Netherlands, Belgium, Switzerland and the Scandinavian countries is also included. The report gives data on consumption, local production and changes in distribution channels. For each country there are detailed analyses of individual market sectors (one sector being dairy products). Forecasts of demand and production up to 1985 are made on the basis of economic indicators. [From *Maelkeritidende* 90, No. 17, p. 447.] ADL

146

[Economics of quality control in the Soviet food industry.] *Ekonomika upravleniya kachestvom produktov v pishchevoi promyshlennosti*, USSR. [Book]

Ladyzhanskii, I. A.

269pp. (1976) [Ru] Moscow, USSR; *Pishchevaya promyshlennost*, Price 1.61r

This book, intended for students and food industry economists, includes the following chapters: Theoretical aspects of quality control (pp. 7-81); Quantitative estimates and evaluations of quality control (pp. 82-115); Planning of quality control (pp. 116-187); and Organizational and economic methods of stimulating improved quality control (pp. 188-262). STI

147

Foodservice planning: layout and equipment. [Book]

Kotschevar, L. H.; Terrell, M. E.

Ed. 2, xv + 601pp. ISBN 0-471-50491-2 (1977) [many ref. En] Chichester, Sussex, UK; John Wiley & Sons Ltd. Price £13.75; \$23.00 [Dep. of Hotel Administration, Univ. of Nevada, Las Vegas, Nevada, USA]

This book is intended not only for those actively engaged on study or planning of food facility layouts, such as architects and students of architecture, educators, and students in foodservice management, equipment manufacturers and dealers, planners of food facilities and consultants, but also for dietitians and other food managers who will be responsible for operating facilities. The book is divided into 4 chapters: Planning (pp. 3-159); Functional areas of food facilities (pp. 163-315); Supporting factors and physical conditions (pp. 320-405); and Equipment selection (pp. 406-570). Chapters included are: Preparation for planning (pp. 3-25); Characteristics of food facilities (pp. 26-50); Layout analysis (pp. 51-94); Operational aspects in layout planning (pp. 95-119); Space allocations (pp. 120-159); Functional outline and check list (pp. 163-174); Receiving and storage (pp. 176-189); Food processing (pp. 190-229); Serving facilities (pp. 230-273); Housekeeping sections (pp. 274-305); Management office and facilities for employees and guests (pp. 307-315); Energy and electricity (pp. 320-335); Lighting (pp.

337-347); Water, steam, and plumbing (pp. 350-359); Environmental planning (pp. 360-387); Sound control (pp. 388-396); Floors and walls (pp. 398-405); General principles for equipment selection (pp. 406-443, 6 ref.); [Continued in following abstr.] VJG

148

Foodservice planning: layout and equipment. [Book]

Kotschevar, L. H.; Terrell, M. E.

Ed. 2, xv + 601pp. ISBN 0-471-50491-2 (1977)

[many ref. En] Chichester, Sussex, UK; John Wiley & Sons Ltd. Price £13.75; \$23.00 [Dep. of Hotel Administration, Univ. of Nevada, Las Vegas, Nevada, USA]

[Continued from preceding abstr.] Mechanical equipment (pp. 444-462); Cooking equipment (pp. 464-487); Serving equipment (pp. 489-506); Refrigeration and low-temperature storage equipment (pp. 508-519); Auxiliary equipment (pp. 522-533); Transportation and mobile equipment (pp. 534-552); and Utensils and tableware (pp. 554-570). An appendix (pp. 572-588) is included. VJG

149

Food service in institutions. [Book]

West, B. B.; Wood, L.; Harger, V. F.; Shugart, G. S.

Ed. 5, viii + 839pp. ISBN 0-471-93393-7 (1977)

[many ref. En] Chichester, Sussex, UK; John Wiley & Sons Ltd. Price £13.50; \$23.00

This book is intended to be used as a basic text by students in food systems management and as a ready reference by the people actively engaged in the planning production, and service of meals for larger than family size groups. Meal planning and food standards, have been left in one chapter, while Delivery and service of food, is a newly added chapter. Less space is given to food products and their preparation, since these areas are well covered in prerequisite courses. The chapters on Personnel organization and administration, sanitation and Safety, and Financial control, are updated. The book is divided into 3 sections: Quantity food service (pp. 3-338); Organization and administration (pp. 341-630); and Physical facilities (pp. 633-805). Chapters included are: Foodservice systems and their development (pp. 3-33, 24 ref.); Meal planning and food standards (pp. 35-80, 13 ref.); Food selection and storage (pp. 81-203, 32 ref.); Quantity food production (pp. 205-299, 21 ref.); Delivery and service of foods (pp. 301-338, 14 ref.); Organization and management (pp. 341-379, 34 ref.); Administrative leadership (pp. 381-411, 19 ref.); [Continued in following abstr.] VJG

150

Food service in institutions. [Book]

West, B. B.; Wood, L.; Harger, V. F.; Shugart, G. S.

Ed. 5, viii + 839pp. ISBN 0-471-93393-7 (1977)
[many ref. En] Chichester, Sussex, UK; John
Wiley & Sons Ltd. Price £13.50; \$23.00

[continued from preceding abstr.] Personnel
management (pp. 413-463, 25 ref.); Cost control
(pp. 465-550, 23 ref.); Sanitation and safety (pp.
551-630, 45 re.); Floor planning and layouts (pp.
633-709, 21 ref.); Equipment for kitchens and
serving rooms (pp. 711-767, 11 ref.); Furnishings
and equipment for dining rooms (pp. 769-805, 12
ref.). 2 appendices are included: Plans for the
organization of college residence halls (pp. 807-
827); and Conversion tables (pp. 828-830). VJG

151

Trade yearbook; volume 29: 1975. [Book]

Food & Agriculture Organization

FAO Trade Yearbook xxxvi + 531pp. ISBN 92-5-
000084-7 (1976) [En, Fr, Es] [Rome, Italy]

This yearbook includes data on annual import
and export quantities and values for 1970-1975 of
individual agricultural products. They are tabulated
as total world figures as well as for each continent
and individual countries. [See FSTA (1976) 8 4D81
for 1974 yearbook.] AL

152

Scientific farm animal production. [Book]

Bogart, R.

x + 420pp. ISBN 8087-2802-4 (1977) [3 ref.
En] Minneapolis, Minnesota, USA; Burgess
Publishing Co. Price \$15.95 [Dep. of Animal Sci.,
Oregon State Univ., Corvallis, Oregon, USA]

This textbook, intended for undergraduate
students in animal science, includes the following
chapters containing information related to food
science: Livestock and world needs, by F. F.
McKenzie (pp. 1-7, 2 ref.); The meat we eat (pp. 9-
19, 4 ref.); Milk and milk products (pp. 21-26, 5
ref.); and Types, market classes and grades of farm
animals (pp. 377-384, 1 ref.). An 18-pp. glossary
and an 8-pp. subject index are included. AJDW

PROCESSES AND EQUIPMENT

153

**[Automation of technological processes in the meat
processing and dairy industries.]** Osnovy
avtomatizatsii tekhnologicheskikh protsessov v
myasnoi i molochnoi promyshlennosti. [Book]
Vorob'eva, N. I.

316pp. (1976) [Ru] Moscow, USSR; Izdatel'stvo
Pishchevaya Promyshlennost'. Price 0.88r

This textbook is intended for students of food
technology and technicians working in the meat
processing and dairy industries. It includes the
following chapters: Basic concepts and systems of

automation (pp. 5-8); Basic theoretical principles of
automatic regulation (pp. 9-64); Apparatus for
technological control and automatic equipment for
automation systems (pp. 65-159); Planning of
automation of industrial processes (pp. 160-181);
General concepts of telemechanics and electrical
signalization (pp. 182-197); Special apparatus and
technical aids for automation of technological
processes in the dairy industry (pp. 198-232);
Schemes of automation of processes in the dairy
industry (pp. 233-256); Special apparatus and
technical aids for automation of technological
processes in the meat industry (pp. 257-263);
Schemes of automation of processes in the meat
industry (pp. 264-290); and Automation of
auxiliary industrial processes (pp. 291-314). STI

154

Food process engineering. [Book]

Leniger, H. A.; Beverloo, W. A.

x + 552pp. ISBN 90-277-0605-0 (cloth) & ISBN
90-277-0659-X (paper) (1975) [En] Dordrecht,
Netherlands; D. Reidel Publishing Co. Price f120
(cloth) & f50 (paper) [Food Sci. Dep., Agric.
Univ., Wageningen, Netherlands]

This book (intended for the advanced reader and
assuming basic knowledge) deals with general
theoretical and practical aspects of food process
engineering, with some emphasis on differences
from chemical engineering. The principles are
explained using the concepts of processes and
operations, with commodities as examples. Chapter
headings are: Introduction (pp. 1-6); Transport
phenomena (pp. 7-106), dealing with fluid
dynamics, heat transfer, and mass transfer;
Mechanical operations (pp. 107-273), dealing with
handling of materials mixing of materials, size
reduction and enlargement, and mechanical
separations; and Physical operations (pp. 274-545),
covering heating and cooling, physical methods of
food preservation (by heat, low temp.,
dehydration), and physical separations (by concn.,
extraction, distillation, crystallization, and
miscellaneous methods). AL

155

Food engineering operations. [Book]

Brennan, J. G.; Butters, J. R.; Cowell, N. D.; Lilly,
A. E. V.

Ed. 2, xiv + 532pp. ISBN 0-85334-694-1 (1976)
[many ref. En] Barking, Essex, UK; Applied
Science Publishers Ltd. Price £15.00 [Nat. Coll. of
Food Tech., Univ. of Reading, Weybridge, Surrey,
UK]

This second edition has been thoroughly revised
and extended. New sections have been added, e.g.
on membrane separation, thawing and solid liquid
extraction. The book is divided into 4 parts:
Preliminary operations; Conversion operations;
Preservation operations; and Ancillary techniques.
Chapters included are: The raw material and the
process (pp. 3-17, 23 ref.); Cleaning of raw
materials (pp. 18-33, 23 ref.); The sorting and
grading of foods (pp. 34-57, 19 ref.); Size reduction
and screening of solids (pp. 61-83, 16 ref.); Mixing

and emulsification (pp. 84-119, 33 ref.); Filtration and membrane separation (pp. 120-153, 23 ref.); Centrifugation (pp. 154-174, 9 ref.); Solid-liquid extraction and expression (pp. 175-207, 19 ref.); Crystallisation (pp. 208-227, 10 ref.); Heat processing I (pp. 228-248, 26 ref.); Heat processing II (pp. 251-285, 42 ref.); Evapoaration (pp. 286-312, 24 ref.); Dehydration (pp. 313-359, 29 ref.); Freezing (pp. 360-382, 21 ref.); Irradiation (pp. 383-394, 9 ref.); Food storage (pp. 395-417, 20 ref.); Plant hygiene - hygienic design, cleaning and sterilising (pp. 421-441, 36 ref.); Water supplies and waste disposal (pp. 442-466, 43 ref.); and Materials handling (pp. 467-498, 24 ref.). 4 appendices are included: Fluid flow formulae; Heat transfer formulae; Psychrometrics; and International system of units. [See FSTA (1969) 1 5E388 for Ed. 1.] VJG

156

Food processing industries. [Book]

Chand, S.
278pp. (1973/1974) [En] Delhi, India; Small Industry Research Institute Price Rs36.00

This book, the 17th Publication on Small Scale Industries, largely consists of formulas, recipes and manufacturing processes for a wide variety of food products. It contains the following chapters: How to plan a small bakery of your own or bakery industry (pp. 9-26); Manufacture of sugar-candy and confectionery (pp. 27-61); Preserving fruits and vegetables (pp. 62-94); Aerated water (pp. 95-103); Milk products (pp. 104-141), i.e. cheese, processed cheese, condensed and evaporated milk, cream, butter, milk powder, malted milk powder; Miscellaneous food products (pp. 142-157), e.g. ice cream, jellies, toffee, sugar confectionery, pickles, chutneys, tomato ketchup, instant pudding, instant cake mix, pop corn, artificial vanilla flavour; Squashes and cordials (pp. 158-162); Vegetable oil industry (pp. 163-179); Flour mill (pp. 180-181); Dal mill (p. 182); Oil mill (pp. 183-188); Paparh, barhian pulses and spices industry (pp. 189-192); Potato chips (pp. 193-195); Vermicelli (p. 196); Corn flakes (pp. 197-200); Canning - fruits and vegetables (pp. 201-214); Drying and dehydration of fruits and vegetables (pp. 215-228); Essences for fruits and vegetables (pp. 229-238); Indian food laws, regulations and specifications (pp. 239-267); and Food machineries and equipments manufacturers [in India] (pp. 268-272); the addresses of these manufacturers are given in an appendix (pp. 273-278). JA

157

[Thermo-physical characteristics of food products and materials.] Teplofizicheskie kharakteristiki pishchevykh produktov i materialov. [Book]

Ginzburg, A. S.; Gromov, M. A.; Krasovskaya, G. I. Ukolov, V. S.
223pp. (1975) [Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.91r

The book is intended for scientific workers and technicians engaged in the food industry as well as

students at specialized institutes and universities. It includes the following chapters: Thermo-physical properties of food materials (pp. 9-36); Methods of determination of thermo-physical characteristics, used for the study of food products and food materials properties (pp. 37-78); Importance of thermo-physical characteristics of food products and materials (pp. 79-158); and application of thermo-physical characteristics of food products and materials for analysis of food drying, cooling and storage processes (pp. 159-205). STI

158

Food technology in the 1980s. [Book]

United Kingdom, Royal Society of London
198pp. ISBN 0-85403-076-X (1975) [En] 6
Carlton House Terrace, London, UK; Price £4.50

This book contains a discussion on food technology in the 1980's, held on 22-23 May 1974 and organized by Sir Ernst Chain, S. A. Goldblith, L. Rey and A. Spicer. The report was first published in Proceedings of the Royal Society of London, Series B (1975) 191 (1102) 1-198. Papers included are: Contributions of processing preservation towards the food technologies of the 1980's, by A. Spicer (pp. 3-7); Freezing and freeze-drying, by L. Rey (pp. 9-19, 5 ref.); Membrane separation processes and freeze concentration in the 1980's, by M. Karel (pp. 21-48, 14 ref.); Processing, catering, and cooking of foods by means of electromagnetic radiation, by S. A. Goldblith (pp. 49-69, 26 ref.); Food process engineering, by W. W. Rothmayr (pp. 71-86, 13 ref.); Thermal processing, by A. Hersom (pp. 87-98, 13 ref.); Food technology and the law, by A. H. Elton (pp. 99-110, 5 ref.); Freezing technology in the market place, by J. Sheldon (pp. 111-129); Textural properties and food acceptability, by P. Sherman (pp. 131-144, 43 ref.); Flavour - a problem for the consumer or for the food producer?, by E. von Sydow (pp. 145-153, 11 ref.); Food transport in the 1980's, by P. O. Roberts (pp. 155-168, 15 ref.); The aquacultural revolution, by J. I. W. Anderson (pp. 169-184, 17 ref.); and Storage and shelf life, by J. N. Robson (pp. 185-191). AL

159

Elements of food engineering. [Book]

Harper, J. C.
vii + 282pp. ISBN 0-87055-218-X (1976) [34 ref. En] Westport, Connecticut, USA; AVI Publishing Co. Inc. [Dep. of Agric. Eng., Univ. of California, Davis, California, USA]

This book, published as a memorial to the author, presents engineering fundamentals as applied to basic food processing. It is intended primarily for food science degree students. Chapters are: Engineering dimensions and units (pp. 1-12); Mass balance (pp. 13-22); The first law of thermodynamics (pp. 23-31); Thermodynamic properties of pure substances (pp. 32-56); Combined mass and energy balance (pp. 57-62); Fluid handling (pp. 63-73); Fluid flow (pp. 74-118); Heat transfer (pp. 119-187); Mixtures of

gases and vapors (pp. 188-206); Refrigeration (pp. 207-229); Mass transfer (pp. 230-240); and Dehydration (pp. 241-270). The book is based on thorough treatment of fundamental concepts of physics and engineering. In addition it gives numerous examples of applications to food processes and equipment, e.g. pumping of liquids, heat exchangers, heating processes, refrigeration, freezing, evaporation, dehydration and temp. humidity control of food stores. The various food examples include frequent references to milk (liquid, conc., dried), ice cream, and fruit and vegetable products. AL

160

Food engineering systems. Vol. 1. Operations. [Book]

Farrall, A. W. (Editor)

x + 615pp. ISBN 0-87055-190-6 (1976) [many ref. En] Westport, Connecticut, USA; AVI Publishing Co. Inc. Price \$45.00 (USA) \$46.00 (Foreign) [Agric. Eng. Dep., Michigan State Univ., East Lansing, Michigan, USA]

This comprehensive book, most of it written by the editor, is designed for students, plant operators and managers. Chapters include: Physical and chemical properties of food products and handling materials (pp. 1-27, 31 ref.); Mechanical harvesting of fruits and vegetables (pp. 28-44, 41 ref.); Thermal processing, by H. L. Mitten, Jr. (pp. 45-90, 6 ref.); Cooling and refrigeration (pp. 91-117, 6 ref.); Freezing and cooling application, by H. L.

Mitten, Jr. (pp. 118-153, 7 ref.); Bakery products, by D. R. Thompson (pp. 154-180, 5 ref.); Evaporating and drying equipment (pp. 181-215, 15 ref.); Separators and separating (pp. 216-227, 7 ref.); Grinding and size reduction (pp. 228-244, 9 ref.); Homogenization (pp. 245-262, 33 ref.); Extruders and extractors (pp. 263-271, 7 ref.); Irradiation of food (pp. 272-284, 29 ref.); Cereal grain processing (pp. 285-294, 6 ref.); Churning and butter handling equipment (pp. 295-303, 5 ref.); Cheese plant equipment (pp. 304-317, 6 ref.); Potatoes (pp. 318-331, 7 ref.); Candy and confectionery manufacturing systems (pp. 332-344, 4 ref.); Egg processing (pp. 345-358, 17 ref.). [Continued in following abstr.] AL

161

Food engineering systems. Vol. 1. Operations. [Book]

Farrall, A. W. (Editor)

x + 615pp. ISBN 0-87055-190-6 (1976) [many ref. En] Westport, Connecticut, USA; AVI Publishing Co. Inc. Price \$45.00 (USA) \$46.00 (Foreign) [Agric. Eng. Dep., Michigan State Univ., East Lansing, Michigan, USA]

[Continued from preceding abstr.] Meat processing and packaging (pp. 359-380, 13 ref.); Fruit and vegetable processing systems (pp. 381-404, 5 ref.); Canning and filling (pp. 405-430, 14 ref.); Food packaging, by W. H. Clifford & S. W. Gyeszly (pp. 431-473, 19 ref.); Automation and

materials handling (pp. 474-517, 9 ref.); Sanitation and water supply (pp. 518-540, 9 ref.); and Safety and occupational safety and health administration (pp. 541-548, 3 ref.). Questions follow each chapter. The appendix contains 51 miscellaneous tables of useful data. AL

162

Agricultural process engineering. [Book]

Henderson, S. M.; Perry, R. L.

xi + 422pp. ISBN 0-87055-212-0 (1976) [many ref. En] Westport, Connecticut, USA; AVI Publishing Co. Inc. Price \$21.00 (US) \$22.00 (Foreign) [Dep. of Agric. Eng., Univ. of California, Davis, California, USA]

This book deals with basic agricultural process engineering, with particular reference to food processing. Chapters are: The engineering approach (pp. 1-8); Fluid mechanics (pp. 9-45, 30 ref.); Fluid-flow measurements (pp. 46-83, 10 ref.); Pumps (pp. 84-107, 6 ref.); Fans (pp. 108-129, 9 ref.); Size reduction (pp. 130-159, 16 ref.); Cleaning and sorting (pp. 160-198, 16 ref.); Materials handling (pp. 199-236, 25 ref.); Heat transfer (pp. 237-280, 12 ref.); Air-vapor mixtures (the psychrometric chart) (pp. 281-301, 7 ref.); Drying (pp. 302-339, 34 ref.); Refrigeration (pp. 340-366, 6 ref.); Process condition observations, records, and controls (pp. 367-390, 14 ref.); Cost analysis (pp. 391-406, 8 ref.); Process analysis and plant design (pp. 407-418, 5 ref.); and Manual operation economy (pp. 419-427, 5 ref.). AL

163

Cooling technology in the food industry. [Book]

Ciobanu, A.; Lascu, G.; Bercescu, V.; Niculescu, L. 500pp. ISBN 0-85626-018-5 (1976) [many ref. En] Tunbridge Wells, Kent, UK; Abacus Press Price £16.50 [Lab. of Refrigeration, Res. Inst. for the Food Ind. & Food Chem., Bucharest, Romania]

This book is a revised, rewritten edition of the Romanian language edition of *Frigul Artificial in Fabricarea si Conservarea Produselor Alimentare*, first published by Editura tehnica, Bucharest, 1971. It is a review of the many aspects of the utilization of refrigeration in food processing and preservation. The book is divided into 3 parts: Scientific background (pp. 11-98); General systems applied in food refrigeration (pp. 101-270); and Applications (pp. 273-498). Chapters included are: Basic principles of food preservation by refrigeration (pp. 11-22, 40 ref.); Effects of low temperatures on foods (pp. 23-98, 233 ref.); Chilling (pp. 101-137, 76 ref.); Freezing (pp. 139-222, 197 ref.); Air conditioning (pp. 223-245, 53 ref.); Additional treatments to refrigeration (pp. 247-256, 72 ref.); Freeze-drying (pp. 257-270, 34 ref.); Meat and meat products (pp. 273-299, 87 ref.); Poultry (pp. 301-316, 44 ref.); Fish and fish products (pp. 317-345, 94 ref.); Milk and dairy products (pp. 347-366, 44 ref.); Eggs (pp. 367-376, 39 ref.); Fruits and vegetables (pp. 377-410, 97 ref.); Ice cream (pp. 411-430, 29 ref.); Prepared foods (pp. 431-447, 52 ref.); Fermented beverages

(pp. 449-462, 17 ref.); Other food products (pp. 463-475, 20 ref.); and Cold chain (pp. 477-498, 52 ref.). 4 appendices are included: Enthalpy table for some foodstuffs; Mollier psychrometric diagram; Carrier psychrometric diagram; and Conversion table. VJG

164

XIVth International Congress of Refrigeration. [Conference proceedings]
International Institute of Refrigeration; Institut International du Froid

Bulletin de l'Institut International du Froid 55 (3)
438pp. (1975) [En, Fr] Paris, France

This issue of the Bulletin contains summaries and titles of papers for presentation at the XIVth International Congress of Refrigeration, held in Moscow on 20-30 Sept. 1975. Sessions covered include: Cryoengineering (pp. 618-635); Liquefaction and separation of gases (pp. 636-661); Thermodynamics and transport processes (pp. 662-705); Refrigerating machinery (pp. 706-741); Freeze-drying - cryobiology - medical applications (pp. 742-775); Food science and technology (pp. 776-829); Refrigerated storage (pp. 830-861); Refrigerated land transport (pp. 862-879); Refrigerated sea transport (pp. 880-893); and Air conditioning (pp. 894-921). Summaries, in En and Fr, include approx. 100 of food interest. AL

165

[Air and industry.] L'aria e l'industria. [Book]
Canuti, A.
384pp. (1975) [many ref. It] Pinerolo, Italy;
Chirrotti Editori (London, UK; Food Trade Press)
Price £9.50; L13 000

This well-produced and comprehensive book includes the following chapters: Introduction [terricide, types of pollution] (pp. 13-32, 8 ref.); Air (pp. 33-34); Origins of atmospheric pollution (pp. 35-50, 15 ref.); Problems of chemical analysis connected with atmospheric pollution (pp. 51-72); Interpretation of meteorological events (pp. 73-81, 6 ref.); Analytical techniques (pp. 83-122, 10 ref.); Analytical techniques for the more common pollutants (pp. 123-153, 16 ref.); Automatic and mobile equipment (pp. 155-178); Methods for detn. of pollutants (pp. 179-191, 18 ref.); Effects of atmospheric pollution on human health (pp. 193-234, 3 ref.); Treating plant (pp. 235-256); Italian legislation (pp. 257-297); Radioactive atmospheric pollutants (pp. 299-354, 80 ref.); and Chronology of Italian legislation. A 20-pp. subject index is included. HBr

166

[Flotation in the food industries.] Flotatsiya v pishchevoi promyshlennosti. [Book]
Matov, B. M.

165pp. (1976) [45 ref. Ru] Moscow, USSR;
Pishchevaya Promyshlennost'. Price 0.57r

Results of laboratory and pilot plant experiments with the flotation technique for purification of

grape juice, fat removal from liquids and effluent treatment confirmed the potential of the method for use in the food industry. This book discusses flotation in the following chapters: Liquid heterogenous systems and methods for their separation (pp. 5-19); Aeration methods and flotation equipment (pp. 19-52); Grape juice purification (pp. 52-85); Isolation of gluten in the starch manufacturing industry (pp. 85-100); isolation of fodder yeasts (pp. 100-106); Fat removal from liquids (pp. 106-139); and Purification of effluents at food plants (pp. 139-164). STI

167

[Problems of and calculations for heat exchange processes in the refrigeration and food industries.]
Sbornik zadach i raschetov protsessov teploobmena v kholodil'noi i pishchevoi promyshlennosti. [Book]
Danilova, G. N.; Filatkin, V. N.; Shcherbov, M. G.; Buchko, N. A.
240pp. (1976) [37 ref. Ru] Moscow, USSR;
Pishchevaya Promyshlennost'. Price 0.75r

The theory of heat conduction, heat exchange and heat radiation is discussed in the following chapters: Conductivity of heat under stationary conditions (pp. 7-24); Conductivity of heat under non-stationary conditions (pp. 24-44); Heat transfer during free movement of liquids (pp. 44-51); Heat transfer during forced movement of liquids (pp. 51-73); Heat transfer during boiling, condensation and melting (pp. 73-96); Heat radiation (pp. 96-136); Heat exchange between water and warm air (pp. 136-147); Heat exchange over corrugated surfaces (pp. 147-162); and Calculations for heat exchangers (pp. 162-213). STI

168

[Designing of canneries.] Proektirovanie konservnykh zavodov. [Book]
Fan-Yung, A. F.

306pp. (1976) [Ru] Moscow, USSR; Pishchevaya promyshlennost' Price 0.86r

This book includes the following chapters: General aspects of cannery design (pp. 7-16); Technical and economical principles of building and reconstruction of canneries (pp. 17-32); Technological design of canneries (pp. 33-126); Arrangement of processing departments (pp. 127-151); Arrangement of plant, and the overall plan (pp. 152-186); Constructional and sanitary engineering design (pp. 187-205); Processing department communications (pp. 206-216); Power system management (pp. 217-225); Refrigeration and freezing facilities (pp. 226-233); Automatic control and regulation (pp. 233-247); Safety and fire precautions (pp. 248-252); Estimates and technical and economic indices (pp. 253-257); Formation, agreement and confirmation of projects and estimates (pp. 258-263); and Diploma projects (pp. 264-300). STI

169

[Automatic densitometers and apparatus for measurement of concentration in the food industry.] Avtomaticheskije plotnomy i kontsentratomertry v pishchevoi promyshlennosti. [Book]

Glybin, I. P.

180pp. (1975) [Ru] Moscow, USSR; Pishchevaya promyshlennost' Price 0.68r

This book, intended for technicians in most branches of the food industry, includes the following chapters: Apparatus based on methods of direct density measurements (pp. 7-122); Apparatus based on methods of indirect density measurements (pp. 123-140); and Methods of automatic compensation of temp.-dependet changes of density (pp. 141-166). STI

170

Workshop computer applications in fermentation technology 1976. [Book]

Jefferis, R. P., III Germany, Federal Republic of, Gesellschaft für Biotechnologische Forschung mbH (Editor)

152pp. ISBN 3-527-25719-5 (1976) [many ref. En] Weinheim, New York, USA; Verlag Chemie Price DM65.00

In view of the rapid expansion of fermentation technology for numerous applications (including conventional food uses and biomass production), the application of computer-supported process development and control has aroused widespread interest. This book is the result of a conference on computers in biotechnology, held under the auspices of the Gesellschaft für Biotechnologische Forschung mbH on July 5, 1976 in Braunschweig-Stockheim, Federal Republic of Germany. It consists of the following 11 papers: Optimization of fermentation plants, by H. T. Blachere, P. Peringer & G. V. Corrieu (pp. 1-10, 16 ref.); Software engineering: experience in a consulting agency, by G. Selva & P. Zerbetto (pp. 11-19, 21 ref.); Software and file structures for computer-coupled pilot fermentation plants, by R. P. Jefferies, III (pp. 21-36, 27 ref.); On-line analysis and control of fermentation processes, by L. K. Nyiri, G. M. Toth, C. S. Krishnaswami & D. V. Parmenter (pp. 37-46, 17 ref.); Low cost data acquisition and analysis with on-line desk calculators, by W. Hample, H. P. Bach & M. Röhr (pp. 47-57, 3 ref.); Applications of computers to the indirect measurement of biomass concentration and growth rate by component balancing, by D. W. Zabriskie, W. B. Armiger & A. E. Humphrey (pp. 59-72, 14 ref.); Design of the man-machine interface for computer coupled fermentation, by A. Meskanen (pp. 73-91, 5 ref.); [Continued in following abstr.] HBr

171

Workshop computer applications in fermentation technology 1976. [Book]

Jefferis, R. P., III Germany, Federal Republic of, Gesellschaft für Biotechnologische Forschung mbH (Editor)

152pp. ISBN 3-527-25719-5 (1976) [many ref. En] Weinheim, New York, USA; Verlag Chemie Price DM65.00

[Continued from preceding abstr.] The use of models in fermentation control, by T. Yoshida & H. Taguchi (pp. 93-106, 43 ref.); Application of an on-line system of coupled computers to fermentation modelling, by M. Reuss, R. P. Jefferis, III & J. Lehmann (pp. 107-124, 23 ref.); Identification of fermentations by polynomial methods, by D. Ribot (pp. 125-139, 5 ref.); and Digital filtering for automatic analysis of cell density and productivity, by R. P. Jefferis, III, H. Winter & H. Vogelmann (pp. 141-152, 15 ref.). HBr

172

Objective methods for food evaluation. Proceedings of a Symposium. [Conference proceedings] United States of America, National Research Council, Committee on Food Stability; United States of America, US Army Natick Research & Development Command

vii + 299pp. ISBN 0-309-02520-6 (1976) [many ref. En] Washington, DC, USA; National Academy of Sciences

The Symposium, held on 7-8 Nov. 1974, in Boston Marriott, Newton, Massachusetts, had as its purpose the investigation and summarizing of the current status of objective methods for: clarifying and improving specifications for procurement of foods for the military; predicting storage life or determining past history of military food items; and evaluating the applicability of existing objective methods for new food products. Individual papers presented were: Quality evaluation of frozen entree products, by J. M. Tuomy (pp. 63-67); Modern analytical techniques for inspection problems, by F. M. Bordeaux & W. L. Brown (pp. 69-77, 17 ref.); Quality evaluation of eggs and poultry meats, by L.-S. Tsai (pp. 79-92, 75 ref.); Determination of seafood quality, by P. A. Lerke (pp. 95-101, 11 ref.); Objective determination of fat stability in prepared foods, by D. R. Erickson & R. H. Bowers (pp. 133-144, 21 ref.); Stability of vegetable oil systems and objective methods of measurement, by A. E. Thomas, III (pp. 145-153, 6 ref.); Evaluation of fat stability in emulsified foods, by G. J. Henning (pp. 155-170, 24 ref.); The texture of fatty oils and emulsified foods, by P. Sherman (pp. 171-183, 10 ref.); and The stability of fats and oils in foods, by G. A. Jacobson, D. J. Aldridge & J. A. Kirkpatrick (pp. 185-203, 14 ref.). [Continued in following abstr.] AL

173

Objective methods for food evaluation. Proceedings of a Symposium. [Conference proceedings] United States of America, National Research Council, Committee on Food Stability; United States of America, US Army Natick Research & Development Command

vii + 299pp. ISBN 0-309-02520-6 (1976) [many ref. En] Washington, DC, USA; National Academy of Sciences

[Continued from preceding abstr.] Round table discussions are included dealing with: Texture (pp. 207-214, 12 ref.); Appearance (pp. 215-243, 19 ref.), including a paper on Objective methods for appearance evaluation, by R. S. Hunter (pp. 215-229, 3 ref.); Flavour (pp. 245-264, 65 ref.), dealing with seafood, poultry & eggs, beef, correlation of chemical analysis with flavour changes, flavour measurement in fats and oils, and meat; and Prediction of fat stability (pp. 265-277). A further 3 papers are abstracted separately and are in the author index under United States of America, National Research Council, Committee on Food Stability [Food Evaluation Symposium]. AL

174

Freeze drying processes for the food industry.

[Book]

Gutcho, M. H.

Food Technology Review, Noyes Data Corporation No. 41, xii + 401pp. ISBN 0-8155-0662-7 (1977)

[En] Park Ridge, New Jersey, USA; Noyes Data Corporation Price \$39.00

This book is based on US patents issued since the early sixties that deal with freeze-drying processes for the food industry. It is divided into 3 parts: Freeze-drying practices (pp. 3-134); Equipment for freeze-drying (pp. 135-244); and Freeze-drying of specific foodstuffs (pp. 245-393). The information is arranged under the following headings: The freezing operation (pp. 3-28); Heat transfer mechanisms (pp. 29-63); Maintaining optimum conditions for sublimation (pp. 64-99); Deicing (pp. 100-114); Monitoring the freeze-drying cycle (pp. 115-134); Containers (pp. 135-149); Apparatus modifications (pp. 150-194); Apparatus for continuous freeze-drying processes (pp. 195-244); Freeze-drying of coffee (pp. 245-312); Freeze-drying of other foodstuffs - Meats (pp. 313-342); Milk products (pp. 342-345); Juices (pp. 345-356); Potatoes (pp. 356-364); Vegetables (pp. 364-374); Fruit (pp. 374-379); Artificially sweetened fruit (pp. 379-381); Desserts and candy centers (pp. 382-387); Tea (pp. 387-390); Rice (pp. 390-391); Peanut butter (pp. 391-392); Oyster and shrimp soup material (pp. 392-393); Foodstuff extracts (p. 393); and Liquid foodstuffs (p. 393). Company, inventor and US patent number indexes are included. VJG

175

Energy-saving techniques for the food industry.

[Book]

Casper, M. E. (Editor)

Food Technology Review, Noyes Data Corporation No. 42, xiv + 657pp. ISBN 0-8155-0663-5 (1977)

[En] Park Ridge, New Jersey, USA; Noyes Data Corporation Price \$39.00

This book is based on 2 reports prepared by Development Planning and Research Associates Inc. (DPRA), Manhattan, to assist the Federal Energy Administration in establishing energy efficiency improvement targets for the food

industry as a whole and DPRA's highlights of the analysis for each of the 47 component categories of the food industry. Chapters are: Industry description (pp. 5-21); General methodology (pp. 22-39); General description of energy efficiency improvement measures (pp. 40-50); Conversion from scarce energy forms (pp. 51-53); Special circumstances (pp. 54-57); Target definition (pp. 58-68); Beet sugar industry (pp. 69-82); Wet corn milling industry (pp. 83-95); Meat packaging industry (pp. 96-112); Malt beverage industry (pp. 113-127); Canned fruit and vegetable industry (pp. 128-143); Fluid milk (pp. 144-157); Bakeries - bread, cake and related products (pp. 158-173); Soybean oil mills industry (pp. 174-186); Cane sugar refining industry (pp. 187-199); Frozen fruits and vegetable industry (pp. 200-212); Prepared feeds (pp. 213-230); Shortening and cooking oils industry (pp. 231-240); Food preparations, (pp. 241-249); Animal and marine fats and oils (pp. 250-267); Natural and processed cheese (pp. 268-279). [Continued in following abstr.] AL

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Energy-saving techniques for the food industry.

[Book]

Casper, M. E. (Editor)

Food Technology Review, Noyes Data Corporation No. 42, xiv + 657pp. ISBN 0-8155-0663-5 (1977)

[En] Park Ridge, New Jersey, USA; Noyes Data Corporation Price \$39.00

[Continued from preceding abstr.] Condensed and evaporated milk (pp. 280-291); Canned specialty industry (pp. 292-303); Soft drink industry (pp. 304-316); Poultry dressing plants (pp. 317-328); Distilled spirits industry (pp. 329-340); Sausage and prepared meats industry (pp. 341-356); Pet food industry (pp. 357-371); Raw cane sugar (pp. 372-382); Confectionery products industry (pp. 383-393); Frozen specialty industry (pp. 394-404); Flour and other grain mill products industry (pp. 405-416); Dehydrated food products (pp. 417-427); Bakeries - cookies and crackers (pp. 428-438); Cottonseed oil mills industry (pp. 474-484); Pickles, sauces, and salad dressing industry (pp. 485-495); Ice cream and frozen desserts (pp. 496-506); Creamery butter (pp. 507-518); Chocolate and cocoa products industry (pp. 519-529); Flavoring extracts and syrups industry (pp. 530-539); Poultry and egg processing industry (pp. 540-552); Canned and cured fish and seafoods industry (pp. 553-565); Wines, brandy, and spirits industry (pp. 566-577); Fresh or frozen packaged fish and seafoods industry (pp. 578-591); Vegetable oil mills (pp. 592-601); Rice milling industry (pp. 602-611); Manufactured ice industry (pp. 612-624); Macaroni and spaghetti industry (pp. 625-635); Blended and prepared flour industry (pp. 636-645); and Chewing gum industry (pp. 646-655). This book is also No. 13 in the Energy Technology Review series. AL

177

[Introduction to food biochemistry and technology.

Vol. I.] Introduction a la biochimie et a la technologie des aliments. Vol. I. [Book]

Cheftel, J.-C.; Cheftel, H.

xvi + 381pp. ISBN 2-88020-017-2; ISBN 2-88020-

018-0 (1976) [many ref. Fr] Paris, France;

Technique et Documentation: Paris, France;

Entreprise Moderne d'Edition [Univ. des Sci. & Techniques du Languedoc, Montpellier, France]

This first volume of this detailed introductory textbook of food biochemistry and technology includes the following chapters: Water (pp. 1-32, 23 ref.); The principal food biochemical systems and their behaviour during processing [covering milk and dairy products, meat and fish, cereals, fruit and vegetables, and fats and oils] (pp. 33-267, 19 ref.); and Mechanisms and causes of deterioration of foods [covering microbiological spoilage, lipid oxidation, and enzymic and non-enzymic browning] (pp. 269-363, 7 ref.). A 5-pp. bibliography and an 11-pp. subject index are included. [See following abstr. for Vol. II.]

AJDW

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[Introduction to food biochemistry and technology.

Vol. II.] Introduction a la biochimie et a la technologie des aliments. Vol. II. [Book]

Cheftel, J.-C.; Cheftel, H.; Besancon, P.

xviii + 420pp. ISBN 2-85206-012-4 (1977)

[many ref. Fr] Paris, France; Technique et

Documentation: Paris, France; Entreprise Moderne

d'Edition [Univ. des Sci. & Techniques du Languedoc, Montpellier, France]

This second volume of this textbook includes the following chapters: Quality and organoleptic properties of foods [covering quality evaluation, colour, texture, colloidal properties, rheological properties, flavour and aroma] (pp. 1-86, 69 ref.); Nutrient requirements, and the nutritional value of foods (pp. 87-134, 33 ref.); Toxicological aspects [covering evaluation of toxicity, natural toxic substances in foods, chemical contaminants, and food additives] (pp. 135-164, 46 ref.); Preservation methods [covering freezing, dehydration, heat-treatment, irradiation and chemical preservation] (pp. 165-307, 102 ref.); Packs for foods [covering glass, plastics and metal packs] (pp. 309-359, 36 ref.); Hygiene and cleanliness of food processing plants (pp. 361-392, 22 ref.); and Legislation (pp. 393-409, 16 ref.). An 8-pp. subject index is included. [See preceding abstr. for vol. I.]

AJDW

179

Recipe and process development for canners.

[Book]

Philip, M.

vi + 163pp. ISBN 0-900379-21 (1976) [En]

Orpington, Kent, UK; Food Trade Press Price

£9.00

This book sets out a general approach to

canning, with attention drawn to problems that will be encountered. The 4 sections of the book are: Developing the product (pp. 3-51), dealing with organization for technical development, getting the recipe right, choosing the correct container, the food laws and the canner, and thermal process evaluation; Developing the process (pp. 52-100), dealing with ingredient preparation, inspection and sorting, blanching of vegetables, mixing and batching of ingredients, emulsification, heat transfer, pumping, filling, can seaming, product sterilization, retort operating procedure, assessment of quality standards, yield assessment, hygienic design of plant, and avoidance of waste; Quality control of the process (pp. 101-145), dealing with inspection of raw materials, control of filled weights by statistical checkweighing, testing and inspection of the finished product, and product hygiene; and Cost control of the production process (pp. 146-157), dealing with budgetary control and standard costing as an aid to process control. AL

180

Commercial food patents, U.S., 1976. [Book]

North, H. B.

318pp. (1977) [En] 812 South Ode Street, Arlington, Virginia 22204, USA; Oliver S. North Price \$30

This book covers substantially all the significant US patents issued in 1976 on methods and processes for preparing commercial food products, human food compositions, pet food compositions and production (1967-1976), apparatus for preparing commercial foods, and apparatus and methods for packaging specific foods. It is designed to provide the food processor and food process equipment supplier with subject-classified, fully indexed abstracts. The abstracts are classified into the following chapters: Alcoholic beverages (pp. 1-8); Baking and bakery products (pp. 9-30); Breakfast cereals (pp. 31-32); Canning and preserving (pp. 33-40); Cereal grains and flours (pp. 41-56); Coffee and tea (pp. 57-62); Condiments, seasonings, and flavorings (pp. 63-90); Confections (pp. 91-104); Dehydrated foods (pp. 105-110); Fats and oils (pp. 111-122); Fish and shellfish (pp. 123-130); Freeze-dried and frozen foods (pp. 131-134); Fruits, vegetables, and juices (pp. 135-146); Meat packing and meat products (pp. 147-176); Milk and other dairy products (pp. 177-194); Pet foods (1969-1976) (pp. 195-208); Poultry and egg products (pp. 209-218); Proteins and protein products (pp. 219-234); Snacks (pp. 235-240); Sugar (pp. 241-250); and Miscellaneous (pp. 251-260). Assignee, inventor and patent number indexes are included. [See FSTA (1976) 8 11G789 for 1975 issue.] AL

181

Microwave ovens and frozen foods make cents.

[Book]

Decareau, R. V. International Microwave Power Institute (Editor)

113pp. (1975) [many ref. En] Edmonton, Alberta, Canada Price \$10.00

This publication is Vol. 5 in the Transactions of the International Microwave Power Institute and contains papers given at a 1-day short course at the US Army Natick Development Center, Natick, Massachusetts, on Oct. 23, 1975. Papers were: Introduction, by R. V. Decareau (pp. 1-4); Changing perceptions of food in modern life, by J. A. Koop (pp. 5-19); Basic principles of microwaves, by R. F. Schiffmann (pp. 20-39, 6 ref.); Microwave: capitalize, by V. Ludvigson (pp. 40-43); Nutrient implications of microwave cooking and heating of frozen foods, by C. Y. W. Ang & G. E. Livingston (pp. 44-61, 22 ref.); Microwave cooking utensils, by B. L. Jones (pp. 62-69); Food packaging options for the microwave oven market, by F. B. Shaw (pp. 70-77); Commercial microwave food service applications, by R. V. Decareau (pp. 78-88, 11 ref.); Microwave tempering of frozen foods, by A. Bezanson (pp. 89-100, 6 ref.); and Microwave research at Natick Developments Center, by R. V. Decareau (pp. 101-111, 4 ref.). AL

182

[Centrifugation.] Tsentrifugirovanie. [Book] Sokolov, V. I. 403pp. (1976) [71 ref. Ru] Moscow, USSR; Izdatel'stvo Khimiya. Price 1.50r

This book deals primarily with theoretical principles of centrifugation. The principles for choice of centrifuges for various purposes in the food and chemical industries are also discussed. The following chapters are included: Principles of centrifugation (pp. 9-49); Hydrodynamics of centrifuges (pp. 49-132); Centrifugation under conditions of precipitation (pp. 132-182); Sedimentation centrifuges (pp. 182-208); Thin layer sedimentation centrifugation (pp. 208-244); Centrifugal filtration (pp. 265-321); Filtration centrifuges (pp. 321-362); and Application of centrifugation for analytical purposes (pp. 362-403). STI

183

The home book of food freezing. [Book] Cox, P. M. 352pp. ISBN 0-571-11104-1 (1977) [En] London, UK; Faber & Faber Price £2.50 (paperback)

This revised paperback edition of the book first published in 1972 deals with some basic questions and answers on freezing (pp. 19-33); choice of freezer (pp. 34-58); packaging requirements (pp. 59-75); and methods of freezing prime foods (pp. 76-80), fresh fruit (pp. 107-112), fresh poultry and game (pp. 113-119), fresh fish (pp. 120-126), and dairy produce and eggs (pp. 127-131). The book also contains a comprehensive recipe section (pp. 135-336). AL

PACKAGING

184

Canned foods - principles of thermal process control and container closure evaluation. [Book] United States of America, National Canners Association Ed. 2, x + 206pp. (1975) [En] Berkeley, California, USA; Food Processors Institute Price \$20.00

This second revised edition of this practical textbook (designed for supervisory and other personnel in the food canning industry) includes the following chapters: Introduction [including Federal Regulations for canning of foods] (pp. 1-26); The microbiology of canning (pp. 27-44); Food container handling (pp. 45-58); Food plant chlorination (pp. 59-77); Records for product protection (pp. 79-95); Principles of thermal processing (pp. 97-108); Thermal processing systems (pp. 109-164); and Container closure evaluation (pp. 165-206). AJDW

185

[Cans from new kinds of sheet metals and aluminum.] Konservnaya tara iz novykh vidov zhesti i iz alyuminiya. [Book] Loshin, Ya. Yu. 127pp. (1975) [Ru] Moscow, USSR; Pishchevaya promyshlennost'. Price 0.45r

This book, intended for technicians in the canning industry, includes the following chapters: Cans from varnished electrolytically tinned sheet (pp. 7-49); Cans from varnished chromium plated sheet (pp. 50-72); Cans from aluminium and aluminium alloys (pp. 73-95); Economical effectiveness of using various kinds of materials for production of cans (pp. 96-106); and specific characteristics of lines for production of new types of cans (pp. 107-121). STI

186

[Plastics packaging in the fish industry.] Opakowania z tworzyw sztucznych w przemyśle rybny. [Book]

Kolakowski, E.; Chrzanowski, S.; Orwat, G. 284pp. (1976) [many ref. Pl] Gdansk, Poland; Wydawnictwo morskie. Price 80zl

This book, designed for technicians in the fish industry and students of specialized schools, includes the following chapters: Characteristics of plastics materials used in the fish industry (pp. 14-27); Packaging systems and packaging machines used in the fish industry (pp. 28-126); Packaging of fresh fish (pp. 127-165); Packaging of frozen fish and fish products (pp. 166-208); Packaging of

salted fish (pp. 208-223); Packaging of smoked fish (pp. 223-231); Packaging of fish salads (pp. 232-237); Packaging of fish preserves (pp. 237-260); and Packaging of other fish products (pp. 261-275). STI

187

Package production management. [Book]

Raphael, H. J.; Olsson, D. L.

Ed. 2, ix + 250pp. ISBN 0-87055-217-1 (1976)

[many ref. En] Westport, Connecticut, USA: AVI

Publishing Co. Inc. Price \$21.00 (US) \$22.00

(Foreign) [Dep. of Packaging Sci., Rochester Inst. of Tech., Rochester, New York, USA]

The 1st edition of this book, published 6 yr ago under the title 'Packaging: a scientific marketing tool', has been updated and expanded to produce this 2nd edition. The book is concerned with the proper use of packaging as an aid in the marketing of consumer products and in the attainment of corporate objectives. It attempts to emphasize total use of packaging and to illustrate the need for a sound package development programme. Chapters are: Packaging and our changing nation (pp. 1-25, 26 ref.); Development of the package as a sales tool (pp. 26-49, 18 ref.); How shopping decisions are made (pp. 50-71, 19 ref.); Package development (pp. 72-103, 11 ref.); Management of the packaging function (pp. 104-138, 27 ref.); Areas of special importance to packaging (pp. 139-176, 64 ref.); Package design for selling (pp. 177-197, 19 ref.); Package research and testing (pp. 198-217, 8 ref.); Package graphics reproduction (pp. 218-242, 22 ref.); and The need for packaging professionals (pp. 243-247). JA

188

Handbook of package materials. [Book]

Sacharow, S.

xi + 243pp. ISBN 0-87055-207-4 (1976) [many

ref. En] Westport, Connecticut, USA: AVI

Publishing Co. Inc. Price \$22.00 (US) \$23.00

(Foreign)

This book summarizes and attempts to classify the various materials used for the protection and sale of most consumer packages, with particular emphasis on food and beverage packaging. Chapters are: Origin of packaging development (pp. 1-16, 26 ref.); Glass packaging and closures (pp. 17-40, 26 ref.); Metals (pp. 41-64, 21 ref.); Plastics (pp. 65-83, 17 ref.); Paper, paperboard and corrugated fiberboard (pp. 84-98, 13 ref.); Flexible packaging - paper (pp. 99-107, 25 ref.); Flexible packaging - films (pp. 108-168, 20 ref.); Flexible packaging - foil (pp. 169-181, 18 ref.); Flexible packaging material converting (co-author R. C. Gribbin, Jr., pp. 182-205, 17 ref.); and Packaging and the environment, by R. F. Testin (pp. 206-240, 29 ref.). AL

NEW AND CONVENIENCE FOODS

189

Convenience foods. Recent technology. [Book]

Robbins, P. M.

No. 37, xi + 339pp. ISBN 0-8155-0641-4 (1976)

[En] Park Ridge, New Jersey, USA; Noyes Data Corporation Price \$39.00

This book is based on US patents issued since 1972 that deal with convenience foods. The information is arranged under the following headings: Cereals (pp. 2-46) including ready-to-eat items and 'instant' reconstitutable products; Potato and other snack foods (pp. 47-94) including potato chip processes, starch-based snacks, rice-flour-based snacks; Convenience potato and grain products (pp. 95-135) including instant potato processes, fried potato processes, and rice and grain processes; Synthetic food processes (pp. 136-159); Filled food products (pp. 160-167); Coating preparations (pp. 168-184); Meat and dairy products (pp. 185-216); Food bars (pp. 217-236); Egg and waffle products (pp. 237-244); Fruit and dessert type items (pp. 245-263); Popcorn processes (pp. 264-275); Ethnic and speciality food items (pp. 276-304); and Miscellaneous processes (pp. 305-331) including speciality products and processes, flavourings, adjuvants, and speciality nutritive products. Company, inventor and US patent number index are included. VJG

BEVERAGES - WINE, SPIRITS, TEA, COFFEE, WATER

190

[Science and techniques of wine. Vol. 2. Wine characteristics. Grape ripening. Yeasts and bacteria.]

Sciences et techniques du vin. Tome 2. Caracteres des vins. Maturation du raisin. Levures et bacteries. [Book]

Ribereau-Gayon, J.; Peynaud, E.; Ribereau-Gayon, P.; Sudraud, P.

xx + 556pp. ISBN 2-04-001324-5 (1975) [many ref. Fr] Paris, France; Dunod Price 250F [Univ. de Bordeaux, France]

This second volume in the 4 volume series [see FSTA (1975) 7 1H60 for Vol. 1] contains the following chapters: Conceptions of quality and type (pp. 3-29, 23 ref.); Tasting - the flavour characteristics of wines (pp. 31-89, 52 ref.); Description and composition of the grape (pp. 93-115, 27 ref.); Study of grape ripening (pp. 117-175, 84 ref.); Cytology, systematics and ecology of wine

yeasts (pp. 179-231, 88 ref.); Description of the principal species of wine yeasts (pp. 233-278, 110 ref.); Conditions relating to the development and activity of yeasts (pp. 279-320, 55 ref.); Growth factors of yeasts and fermentation activators (pp. 321-350, 40 ref.); Phenomena of yeast inhibition (pp. 351-370, 39 ref.); Morphology, systematics and ecology of the lactic acid bacteria of wine (pp. 373-415, 82 ref.); Description of the principal species of lactic acid bacteria isolated from wines (pp. 417-438); Conditions relating to the development and activity of lactic acid bacteria in wine (pp. 439-475, 55 ref.); Transformations in wine caused by bacteria: malolactic fermentation and changes (pp. 477-497, 53 ref.); Acetic acid bacteria (pp. 499-508, 21 ref.); and The mechanisms of fermentation (pp. 511-556, 61 ref.). JA

191

[Drying of malt and its intensification.] Sushka soloda i ee intensifikatsiya. [Book] Gavrilencov, A. M.; Makarov, A. P.; Predtechenskii, V. K. 231pp. (1976) [Ru] Moscow, USSR; Pishchevaya Promyshlennost' Price 1.32r

This book, which summarizes data on the design and operation of malt drying apparatus, is intended for brewery technicians, and contains the following chapters: Technological and thermophysical bases of the malt drying process (pp. 5-21); Malt as material for drying (pp. 22-42); Heat exchange in the drying of malt in a solid layer (pp. 43-81); Moisture exchange in the drying of malt in a solid layer (pp. 82-101); Methods for controlling the operation of industrial malt drying apparatus (pp. 102-114); Intensifying the operation of industrial malt drying apparatus (pp. 115-146); Drying of malt is a fluidized bed (pp. 147-187); Radiation-convection drying of malt (pp. 188-204); and High frequency convection drying of malt (pp. 205-220). STI

192

[Distillation of wine and marketing of brandy in the EEC.] Destillation von Wein und Absatz von Branntwein in der Europäischen Gemeinschaft. [Book] Richter, D. x + 222pp. ISBN 7690-4606-4 (1975) [many ref. De] Frankfurt, Federal Republic of Germany; DLG-Verlag Price DM29.00

This book (No. 7 in the series 'Giessen' Reports on Agriculture and Nutrition) includes the following chapters: Integration of the market for wines and spirits (pp. 10-25); EEC regulations for marketing of wines (pp. 26-36); National regulations for marketing of alcoholic beverages (pp. 37-64); Distillation in relation to the market for wine (pp. 65-109); Distillation as a process of technological improvement of the product (pp. 110-128); Development of the market for brandy (pp. 129-165); and Starting points for improvement of marketing of brandy (pp. 166-190). Numerous tables of data are given, together with a 12-pp. bibliography. AJDW

193

[Analysis of organic contaminants of drinking, industrial and waste water.] Die Analyse der organischen Verunreinigungen in Trink-, Brauch- und Abwässern. [Book] Leithe, W.

Ed. 2, xii + 175pp. ISBN 3-8047-0496-4 (1975) [346 ref. De] Stuttgart, Federal Republic of Germany; Wissenschaftliche Verlagsgesellschaft mbH Price DM52.00

This well-presented book, written at a time when concern for and official requirements regarding water in all its aspects are becoming of ever-increasing importance, gives comprehensive coverage of the analytical methods available for all concerned with the many aspects of water utilization and conservation. Chapters include: General section (pp. 1-18, covering amounts and origins of organic contaminants, and methods of treating water and effluent); General methodology (pp. 18-23); Preliminary processes (pp. 24-29, e.g. sampling and enrichment); Organoleptic testing (pp. 30-33); Outline methods for quantitative evaluation of organic substances (pp. 34-74); Chromatographic methods (pp. 75-86); Volatile fatty acids (p. 86); Cyanides (pp. 87-96); Phenols (pp. 96-107); Detergents (tensides) (pp. 108-119); Nitrilotriacetic acid (pp. 119-120); Detn. of hydrocarbons (pp. 120-133); Detn. of volatile chlorinated hydrocarbons (p. 133); Pesticides (pp. 134-149); and Urea, uric acid, coprosterols, urochrome, humic acid, lignin, lignosulphonic acids and 3,4-benzopyrene (pp. 149-160). Appendices give Federal German Standard requirements for effluent purification methods (p. 161) and a table for detn. of O₂ saturation as a function of temp. at a vapour-saturated atm pressure of 760 Torr. A 3-pp. subject index is included. HBr

194

Frank Schoonmaker's encyclopedia of wine. [Book]

Schoonmaker, F. vi + 454pp. ISBN 0-7136-1546-X (1975) [En] London, UK; Adam & Charles Black Ltd. Price £5.25

This well produced, highly readable volume combines the pleasure afforded by casual browsing with the accuracy and comprehensiveness demanded by the serious enquiry. The major portion of the entries in the book is devoted to the wines themselves and to the areas in which they are produced; the range of specific wines covered (even including brand names) and individual places cited is impressive. Another important contribution is the succinct descriptions and explanations of both specialist and common terms used in the wine industry; here, a particularly useful feature is the linking of a term (always quoted in the original language) with the current state of the art, where relevant. Thus, for example, „Qualitätswein mit Prädikat“, not only gives an explanation of the term and associated concepts, but also links it with the important changes introduced into Federal German wine legislation in 1971. Finally, the > 50 maps of

the main wine-growing areas of Europe and California incorporated in the text, and the approx. 100 pp. of appendices (including a listing of the major wines and vintage years for individual countries) further enhance the value of the book. HBr

195

[The brewery. Vol. 1. Technology of malt production.] Die Bierbrauerei. Band 1. Die Technologie der Malzbereitung. [Book] Schuster, K.; Weinfurter, F.; Narziss, L. Ed. 6, xii + 382pp. ISBN 3-432-84996-6 (1976) [many ref. De] Stuttgart, Federal Republic of Germany; Ferdinand Enke Verlag

This 6th revised edition of this detailed basic textbook of brewing includes the following chapters: Malting barley (pp. 3-59); Water (pp. 60-63); Preparation of barley for malting (pp. 64-117); Germination (pp. 118-157); Steeping (pp. 158-179); Malting systems (pp. 180-253); Kilning (pp. 254-321); Malting losses (pp. 322-329); Characteristics of malt (pp. 330-341); Special malts (pp. 342-348); and Small-scale malting (pp. 349-352). A 10-pp. bibliography and a 15-pp. subject index are included. AJDW

196

[Technology of liqueurs and spirits production.] Tekhnologiya likerno-vodochnogo proizvodstva. [Book]

Bachurin, P. Ya.; Smirnov, V. A. 326pp. (1975) [Ru] Moscow, USSR; Pishchevaya promyshlennost'. Price 0.63r

This book, intended for students and those engaged in the production of liqueurs and similar alcoholic beverages, includes the following chapters: Ethyl alcohol - reception and storage (pp. 14-39); Water and water treatments (pp. 40-66); Production of vodka (pp. 67-107); Herbs and plant materials for production of liqueurs (pp. 108-169); Production of alcoholic juices (pp. 170-194); Production of liqueurs and aromatized spirits (pp. 195-234); Basic materials for production of liqueurs and related alcoholic beverages (pp. 235-253); Production of liqueurs with high and low alcohol contents, and of aromatized alcoholic beverages (pp. 254-278); Evaluation of quality of alcoholic beverages (pp. 279-287); and Bottles, bottling and storage (pp. 288-320). STI

197

Wines: their sensory evaluation. [Book]

Amerine, M. A.; Roessler, E. B. xiv + 230pp. ISBN 0-7167-0553-2 (1976) [81 ref. En] San Francisco, USA; W. H. Freeman & Co. Price £6.20 [Univ. of California, Davis, California, USA]

This book describes what the authors believe to be the best approach to the sensory evaluation of wine and gives guidance in making meaningful decisions about wine quality. The book contains 2 parts: Wines and their sensory examination (pp. 1-97) and Statistical procedures (pp. 99-176); 10

appendices (pp. 177-191), consisting of statistical tables; a glossary (pp. 193-205) of useful terms; an annotated bibliography (pp. 207-214); and a subject index (pp. 215-230). Chapters contained in Part I are: Wine quality (pp. 2-17); The senses (pp. 18-47); Factors affecting sensory response (pp. 48-54); The sensory examination (pp. 55-71); Composition of wines (pp. 72-77); and Types of wines (pp. 78-97). Part II discusses the variety of statistical procedures available for quantitatively evaluating the differences among wines and for measuring their overall quality. JA

198

Tea and soluble tea products manufacture. [Book] Pintauro, N. D.

Food Technology Review, Noyes Data Corporation No. 38, x + 261pp. ISBN 0-8155-0645-7 (1977) [En] Park Ridge, New Jersey, USA; Noyes Data Corp. Price \$32.00

The information in this book is based on US and British patents issued since the middle fifties that deal with tea and soluble tea products. The information is arranged under the following headings: Withering and rolling (pp. 3-10); Sorting, fermentation and firing (pp. 11-38); Extraction (pp. 39-81); Tannin-caffeine precipitate (cream) (pp. 82-125); Filtration and concentration (pp. 126-141); Dehydration processes (pp. 142-179); Recovery of aroma (pp. 180-213); Agglomeration and aromatization (pp. 214-238); and Teabags, tea bag receptacles and tag interlocks (pp. 239-256). Company, inventor, and US and British patent number indexes are included. VJG

199

[Processing grapes.] Spracovanie grozna. [Book] Gavornik, A.

391pp. (1976) [many ref. Ru] Bratislava, Czechoslovakia; Priroda Price 32Kcs

The following chapters are included: Grapes as raw material for wine production (pp. 7-33); Pressing of grapes (pp. 33-47); Processing rooms and storage equipment (pp. 47-71); Chemical composition of must, and must processing (pp. 71-99); Must fermentation (pp. 99-125); Alcoholic fermentation and its main products (pp. 125-147); Wine treatment and ageing (pp. 147-160); Wine sulphitation (pp. 160-170); Wine improvement (pp. 170-176); Wine defecation (pp. 176-187); Wine stabilization (pp. 187-197); Wine filtration (pp. 197-214); Bottling of wine (pp. 214-231); Manufacture of red wine (pp. 231-250); Manufacture of special wines (pp. 250-269); Organoleptic evaluation of wine (pp. 269-280); Wine diseases and defects (pp. 280-289); Hygiene, sanitation and decontamination (pp. 289-297); Rules and regulations (pp. 297-309); Practical exercises in microbiology (pp. 309-324); and Analysis (pp. 324-382). STI

200

[Modern analytical methods in drinking water production.] Moderne Analysenmethoden in der Praxis der Trinkwasseraufbereitung. [Book] Quentin, K.-E.; Frimmel, F. (Editors) iv + 263pp. (1974) [many ref. De] Munich, Federal Republic of Germany; R. Koehler-Druck GmbH & Co. KG

This book is the 1st in the series 'Hydrochemische und hydrogeologische Mitteilungen' issued under the general editorship of K.-E. Quentin by the Institut für Wasserchemie und Chemische Balneologie der Technischen Universität München (Munich). It contains the papers given at a conference held at the institute on March 18-19, 1974. Papers include: Sample preservation, by F. J. Sprenger (pp. 11-25, 3 ref.); Methodological bases of serial water analysis, by F. Malz (pp. 27-33); Obtaining analytical information at waterworks, by W. Kölle (pp. 35-43); New analytical approaches to water analysis, by G. Axt (pp. 45-54); Use of summary parameters when determining the content of organic substances in water, with particular reference to UV extinction, by H. Sontheimer & W. Weindel (pp. 55-70, 16 ref.); Significance of and current position in the detn. of COD, by R. Wagner (pp. 71-82, 13 ref.); Phenols in water and their detn., by D. Weil (pp. 83-95, 12 ref.); Detn. of protein and its degradation products, by F. Frimmel (pp. 97-110, 15 ref.); Enzymic test for detn. of pesticides, by L. Weil (pp. 111-119, 8 ref.); Rapid detn. of sulphate by turbidity measurement, by W. Regnet & P. Udluft (pp. 121-129, 8 ref.); Selective detn. of small amounts of cyanide, by H. Mertens (pp. 131-137); Detn. of small amounts of iodide, by F. Dietz (pp. 139-173, 75 ref.); Purity control of anionic polyelectrolytes in waterworks, by L. Scholz (pp. 199-218, 15 ref.); and Rapid methods for estimation of radioactivity in waterworks, by K. Habberger & U. Stürzer (pp. 218-229, 8 ref.). HBr

201

Water. A comprehensive treatise. Vol. V. Water in disperse systems. [Book] Franks, F. (Editor) xvi + 366pp. ISBN 0-306-37185-5 (1975) [732 ref. En] New York, USA; Plenum Press Price \$44.50 [Unilever Res. Lab., Sharnbrook, Bedford, UK]

The systems discussed in this volume border on the many biological and technological areas where important attributes are related to the common factor, water. Such areas include food processing and preservation, cryopreservation, and membrane processes. Chapter headings include: The influence of hydration on the stability of hydrophobic colloidal systems, by D. Eagland (pp. 1-74); Properties of water in capillaries and thin layers, by J. Clifford (pp. 75-132); Hydration and the stability of foams and emulsions, by M. C. Phillips (pp. 133-172); Adsorption of water on well-characterized solid surfaces, by A. C. Zettlemoyer, F. J. Micalé & K. Klier (pp. 249-291); and Specific interactions of

water with bipolymers, by H. J. C. Berendsen (pp. 293-330). AL

202

[Coffee and caffeine.] Kaffee und Coffein. [Book] Eichler, O. xix + 491pp. ISBN 3-540-07281-0 (1976) [De] Heidelberg, Federal Republic of Germany; Springer-Verlag Price DM198; \$1.20

[Continued from preceding abstr.] Effects on fat metabolism, by C.-J. Estler & H. P. T. Ammon (pp. 255-280); Effects on energy metabolism and temp. regulation, by O. Strubelt (pp. 281-286); Effects on the endocrine system, by O. Strubelt (pp. 287-296); Effects on the digestive system, by E. Schmid (pp. 297-321); Metabolism of methylxanthines, by O. Eichler (pp. 323-335); Toxicity of caffeine, by O. Eichler (pp. 337-350); Mutagenic and teratogenic effects of caffeine, by O. Eichler (pp. 351-372); and Coffee and cancer, by O. Eichler (pp. 373-380). An 80-pp. bibliography and a 31-pp. subject index are included. AJDW

203

[Coffee and caffeine.] Kaffee und Coffein. [Book] Eichler, O. xix + 491pp. ISBN 3-540-07281-0 (1976) [De] Heidelberg, Federal Republic of Germany; Springer-Verlag Price DM198; \$81.20

This second, fully revised edition of this comprehensive textbook on coffee and caffeine includes the following chapters: Historical aspects, by O. Eichler (pp. 1-2); Chemistry and processing of coffee, by O. G. Vitzhum (pp. 3-64); Effects of caffeine on the central nervous system, by O. Eichler (pp. 65-102); Effects of caffeine on bodily performance, by O. Eichler (pp. 103-124); Effects of methylxanthines on the function of smooth muscle, by P. Mitznegg (pp. 125-131); Effects of caffeine on the heart and circulatory system, by O. Eichler (pp. 133-170); Effects of caffeine on the respiratory system, by O. Eichler (pp. 171-173); Effects of caffeine on the kidneys and kidney function, by G. Fülgraff (pp. 175-181); Metabolism of caffeine in individual organs, by C.-J. Estler (pp. 183-213); Effects on carbohydrate metabolism, by H. P. T. Ammon (pp. 215-225); Effects on function and metabolic activity of the pancreas, by H. P. T. Ammon (pp. 227-241); Effects of caffeine on cAMP-phosphodiesterase activity, by H. P. T. Ammon (pp. 243-254); [continued in following abstr.] AJDW

204

Larousse dictionary of wines of the world. [Book] Debuigne, G. 271pp. ISBN 0-600-35468-7 (1976) [En] London, UK; Hamlyn Publishing Group Ltd. Price £5.95

This beautifully illustrated and lavishly produced book is in keeping with the standard readers have come to expect of the Larousse series. While offering innumerable delights to the browser, it

contains a considerable amount of scientific and factual information. The entries, in alphabetical order, show a very wide range: thus, there are simple definitions of terms (e.g. fleshy or charpente, the compiler wisely not attempting to translate the untranslatable); brief descriptions of grapes, wines, chateaux and the like; outlines of scientific and technological processes (e.g. fermentation, chaptalisation); and many interesting snippets of information. The value of the book is enhanced by a detailed cross-reference system employing the use of asterisks. HBr

205

Coffee - origin and use. [Book]

Sivetz, M.

479pp. (1977) [En] 3635 N. W. Elmwood Drive, Corvallis, Oregon 97330, USA; Coffee Publications Price \$55.00

This newly revised edition of the book contains the following 8 chapters: Coffee growing countries (53pp.), dealing with history, botanical var., agriculture, harvesting, benefaction, classification and grading of beans; World commerce (72pp.), dealing with exports of green coffee beans, quantities and prices through the years, export controls, exporters, steamship rates and stowage, pilferage, insurance, contracts, import brokers, trading, storage and handling of bags; Coffee consuming countries (80pp.), dealing with blending, roasting and grinding of coffee beans, packaging of coffee products in cans, jars and pouches for market; Cultural aspects (30pp.), dealing with history, coffee houses, flavour additives, dairy and non-dairy sweeteners, substitutes, liqueurs, alcoholic variations, drinking habits, modes of use, types of sales; Physiological effects (44pp.), dealing with aroma and taste senses relating to bean quality and processing effects, effects on human body, dosages, toxicity, excesses, caffeine properties, manufacture, decaffeination and roast product effects; Brewing coffee beverage (56pp.), dealing with history, water qualities and effects, beverage preparation principles, filter papers, pressure brewers, commercial urns, domestic and airline brewers, vending machines and brewing definitions; [continued in following abstr.] AL

206

Coffee- origin and use. [Book]

Sivetz, M.

479pp. (1977) [En] 3635 N. W. Elmwood Drive, Corvallis, Oregon 97330, USA; Coffee Publications Price \$55.00

[Continued from preceding abstr.] Sales and marketing (44pp.); and Instant coffees (86pp.), dealing with history, share of sales, yields and compositions, imports, agglomeration, freeze drying, extract treatment, freeze concn., refrigeration, equipment and processing costs, quality and tests, packaging and patents. The book contains numerous illustrations, diagrams and tables. AL

207

Analytica-EBC. [Book]

European Brewery Convention, Analysis Committee

Ed. 3, 87pp. for each language. (1975) [En, De, Fr] PO Box 190, CH-8047, Zurich, Switzerland; Schweizer Brauerei-Rundschau Price FS110.00

This 3rd edition of Analytica-EBC is in handy ring form in a sturdy plastics cover. It covers the analytical methods issued by the European Brewery Convention since Oct. 1, 1953, revised to Sept. 9, 1974 and valid from Aug. 1, 1975. The methods are in 3 languages, En, Fr and De, each paginated separately for ease of use. The methods covered are divided into the following 8 sections: Care and adjustment of apparatus, covering extract mills and spectrophotometers; Barley, covering sampling, moisture and N contents, 1000-corn wt., germinative capacity and energy, sieving test, prediction of extract of malt from barley analyses, statement of results and recommended form of report; Malt, covering sampling, moisture, N, soluble N and extract contents, 1000-corn wt., colour, diastatic power, α -amylase, viscosity of worts, results and report; Caramel and roasted malts, covering extract content and colour; Cereal adjuncts, covering contents and moisture, extract and fatty substances; Hops and hop products, covering sampling and dispatch, moisture content, α -acids and related substances, and H_2S fermentation test for hops; [Continued in following abstr.] HBr

208

Analytica-EBC [Book]

European Brewery Convention, Analysis Committee

Ed. 3, 87pp. for each language. (1975) [En, De, Fr] PO Box 190, CH-8047, Zurich, Switzerland; Schweizer Brauerei-Rundschau Price FS110.00

[Continued from preceding abstr.] Worts and beers, covering original extract of beers, viscosity, colour of beer, attenuation limit, bitterness, free α -amino N, contents of total polyphenols, Fe, Cu, Ni, diacetyl and 2,3-pentanedione, total SO_2 in beer, EBC scale of formazin haze units, liability to haze formation in beer, and flavour testing; and Statistical planning of collaborative tests and their subsequent analysis, covering the Youden method. The following supplements will be issued: 1 (1977), 2 (1978) and 3 (1980), at FS8.00 each. HBr

209

All about coffee. [Book]

Ukers, W. H.

Ed. 2, xiv + 818pp. ISBN 0-8103-4092-5 (1976) [many ref. En] Detroit, Michigan 48226, USA; Gale Research Co. Price \$35.00

This is a recently issued reprint edition of a comprehensive treatise on all aspects of coffee from its first mention in 900 by an Arabian physician through to 1935. This work, encyclopaedic in treatment, is divided into 6 major sections: Historical (pp. 1-126); Technical (pp. 129-262);

Scientific (pp. 265-320); Commercial (pp. 323-534); Social (pp. 537-658); and Artistic (pp. 660-732). Within each section separate chapters deal with such topics as the introduction of coffee into Western Europe, coffee houses of old London, factory preparation of roasted coffee, pharmacology of the coffee drink, a short history of coffee advertising, world's coffee manners and customs, and coffee in relation to the fine arts. 4 appendices present a chronology of coffee, a dictionary of coffee, a coffee bibliography and a coffee thesaurus. Numerous illustrations and 27-pp. index are included. AL

210

Frank Schoonmaker's encyclopedia of wine.

[Book]

Schoonmaker, F.

Ed. 2, vii + 452pp. ISBN 0-7136-1804-3 (1977)

[En] 35 Bedford Row, London, UK; Adam & Charles Black Ltd. Price £7.50

See FSTA (1977) 9 4H579 for 1st edition.

211

The wines of France. [Book]

Ray, C.

205pp. ISBN 0-7139-1009-7 (1976) [32 ref. En]

London, UK; Allen Lane, Penguin Books Ltd.

Price £4.25

This book takes the reader on a 'wine tour' through the wine-growing regions of France, giving a description of the wines met, listed in alphabetical order, in each region. In addition, interesting historical and technical notes are given at the beginning of each chapter on the major characteristics of the area and wine(s) covered. Chapters are: Introduction (pp. 11-18); France's pride (pp. 19-37, 15 ref. - an historical review of French winemaking); Alsace and Lorraine (pp. 38-52, 1 ref.); Champagne (pp. 53-73, 3 ref.); Burgundy (pp. 74-105, 3 ref.); The Jura and Savoy (pp. 106-115, 1 ref.); The Rhone (pp. 116-126, 1 ref.); Provence and Corsica (pp. 127-132, 2 ref.); Languedoc and Roussillon (pp. 133-139, 2 ref.); The South-West (pp. 140-148, 2 ref.); Bordeaux (pp. 149-171, 4 ref.); The Loire (pp. 172-188, 3 ref.); and Vins doux naturels, Vins de liqueur and Vermouth (pp. 189-192). A table of French wine production 1972-1974 and a 9-pp. index of the principle wines are appended. The book claims to be the first in English to list all Appellation Controlee and Vin Delimite de Qualite Superieure wines. HBr

212

The wines of Germany. [Book]

Ray, C.

224pp. ISBN 0-7139-1033-X (1977) [En]

London, UK; Allen Lane, Penguin Books Ltd.

Price £4.25

Like its companion vol. *The wines of France*

[see preceding abstr.], this book takes the reader on a 'wine-tour', this time of the wine-growing areas of Federal Germany. Chapters are: Introduction (pp. 11-20); The wines of Germany (pp. 21-33, a history of German wine to date); The law and the label (pp. 34-51); The grapes (pp. 52-56); Ripeness is all (pp. 57-58); Red, pink and sparkling wines (pp. 59-65, 1 ref.); The Ahr (pp. 66-71); Mosel-Saar-Ruwer (pp. 72-92); Mittelrhein (pp. 93-100); The Rheingau (pp. 101-111); The Nahe (pp. 112-125); Rheinhessen (Hesse) (pp. 126-144); Hessische Bergstrasse (pp. 145-150); Rheinpfalz (pp. 151-166); Baden (pp. 167-185); Württemberg (pp. 186-201); Franken (pp. 202-211); and Bottles and glasses (pp. 212-215). A table of German wine production 1973-1975 and a 5-pp. index are appended. As with the vol. on France, each regional chapter has a map and lists the wines concerned in alphabetical order. HBr

213

Alcoholic beverages. [Book]

Rose, A. H. (Editor)

xiv + 760pp. ISBN 0-12-596550-8 (1977) [many

ref. En] 24-26 Oval Road, London NW1, UK;

Academic Press Inc. (London) Ltd. Price £25.00

\$48.90 [School of Biol. Sci., Univ. of Bath, UK]

This book, which is Vol. 1 in the Economic Microbiology Series (a further 5 vol. are in preparation), describes the microbiological and biochemical bases of world-wide production of major representatives of beers and wines, fortified wines, and distilled spirits (except brandy). Chapters are: History and scientific basis of alcoholic beverage production, by A. H. Rose (pp. 1-41); Beer, by A. M. MacLeod (pp. 43-137); Cider and perry, by F. W. Beech & J. G. Carr (pp. 139-313); Table wines, by R. E. Kunkee & R. W. Goswell (pp. 315-386); Fruit and honey wines, by A. Jarczyk & Wzorek (pp. 387-421); Sake, by K. Kodama & K. Yoshizawa (pp. 423-475); Fortified wines, by R. W. Goswell & R. E. Kunkee (pp. 477-535); Gin and vodka, by A. C. Simpson (pp. 537-593); Rum, by M. Lehtonen & H. Suomalainen (pp. 595-633); and Whisky, by T. P. Lyons & A. H. Rose (pp. 635-692). Numerous ref. follow each chapter. An author index and detailed 45-pp. subject index are included. AL

214

[Biochemistry of malt and beer.] Biokhimiya soloda i piva. [Book]

Bulgakov, N. I.

357pp. (1976) [336 ref. Ru] Moscow, USSR;

Pishchevaya Promyshlennost'. Price 1.29r

Present knowledge on biochemical, chemical, physicochemical and physical changes taking place in barley during storage and processing are discussed, as well as changes occurring during malt and beer processing and in other raw materials, such as hops and water. The following chapters are included: Raw materials used in brewing (pp. 5-

117); Barley malting (pp. 117-189); The brewing process (pp. 189-263); Main fermentation and beer maturation (pp. 263-316); and The finished beer, (pp. 316-340). STI

215

[Chemico-technological control during the manufacture of malt and beer.] Khimiko-tekhnologicheskii kontrol' proizvodstva soloda i piva. [Book]

Mal'tsev, P. M.; Velikaya, E. I.; Zazirnaya, M. V.; Kolotusha, P. V.

446pp. (1976) [22 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 1.01r

This book, intended as a textbook for students of specialized technological institutes, may also serve scientific workers and post-graduates in all fields dealing with fermentation products. The following chapters are included: Quality of main and auxiliary raw materials (pp. 15-208); Malt production (pp. 208-282); Beer production (pp. 283-387); and Auxiliary materials and waste waters (pp. 387-433). STI

216

[Ciders and sparkling apple wines.] Cidry i yablochnye igristye vina. [Book]

Vecher, A. S.; Yurchenko, L. A.

134pp. (1976) [207 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.49r

The book includes results of investigations into the biochemical processes taking place in the course of apple juice fermentation and its long-term storage. It includes the following chapters: Economic importance of apple trees in the USSR, and utilization of apples in fruit-wine production (pp. 5-8); Apple chemistry (pp. 8-16); Production of natural fermented apple juice and its storage (pp. 16-63); Cider and sparkling wine production from fermented apple juices (pp. 63-80); Biochemical processes during secondary apple juice fermentation and sparkling apple wine storage (pp. 80-103); Technology of sparkling apple wine and sparkling cider production (pp. 103-108); Utilization of fermented apple juice for production of table wine and apple wine low alcohol content (pp. 108-112); and Waste products utilization (pp. 112-124). STI

217

[Handbook for technologists in the spirits industry.] Spravochnik tekhnologa likerno-vodochnogo proizvodstva. [Book]

Yarovenko, V. L.; Burachevskii, I. I.; Bolotina, F. E.; Makeeva, A. N.; Skripnik, K. I.; Rukhlyadeva, A. P.

255pp. (1976) [27 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.80r

This book includes basic information on raw materials, auxiliary materials and their storage, as well as on spirits manufacture and basic production equipment. The following chapters are included: Classification and evaluation of products (pp. 3-8);

Raw materials and their treatment (pp. 8-133); Manufacture of semi-manufactured and finished products (pp. 133-208); and Technical and chemical control in spirits manufacturing plants (pp. 208-251). STI

FRUIT AND VEGETABLES

218

Diseases of tropical and subtropical fruits and nuts. [Book]

Cook, A. A.

xv + 317pp. (1975) [many ref. En] New York, USA; Hafner Press Price £17.50 [Univ. of Florida, USA]

This volume is intended as a summarization of the current knowledge concerning diseases of diverse nature that affect a wide assortment of plants grown naturally in tropical environments. Diseases of the following fruits and nuts are considered: Almond (pp. 1-26); Annatto (pp. 26-27); Annonas (pp. 27-30); Arecanut (betel nut) (pp. 31-38); Avocado (pp. 38-53); Banana (pp. 53-90); Baobab (p. 90); Barbados cherry (pp. 91-92); Bignay (p. 92); Brazil nut (pp. 92-93); Breadfruit, jackfruit (pp. 93-95); Carob (pp. 95-96); Cashew (pp. 96-98); Ceriman (pp. 98-99); Chinese gooseberry (kiwi fruit) (pp. 99-102); Citrus (pp. 102-169); Coconut (pp. 170-183); Date palm (pp. 183-192); Durian (pp. 192-193); Emblic (Anvala, Aonla), otaheite gooseberry (pp. 193-194); Feijoa (p. 195); Fig (pp. 195-207); Guava (pp. 207-212); Jujube (pp. 212-213); Kaki (pp. 213-219); Loquat (pp. 219-224); Lychee (pp. 224-225); Macadamia (pp. 225-229); Mango (pp. 229-241); Mangosteen (pp. 241-242); Mombins, ambarella (p. 242); Natal plum, karaunda (pp. 243-244); Olive (pp. 244-263); Papaya (pp. 263-285); Passion fruit, granadillas (pp. 285-291); Pineapple (pp. 292-300); Pomegranate (pp. 300-301); Rambutan (p. 301); Sapodilla (pp. 301-302); Tamarind (pp. 302-303); Terminalia (p. 303); and Tree tomato, pepino (pp. 304-305). VJG

219

[Encouraging the consumption of fruit and vegetables.] Kształtowanie spożycia owoców i warzyw. [Book]

Bundzich, E.

83pp. (1975) [Pl] Warsaw, Poland; Zakład wydawnictw CRS. Price 12zł

Conditions for realization of the planned higher consumption of fruit and vegetables are presented. The book includes the following chapters: Fruit and vegetables consumption in comparison with other food products (pp. 7-31); How can the market affect the consumption of fruit and vegetables? (pp. 31-62); and Conditions for the development of fruit and vegetables consumption (pp. 63-83). STI

220

[Development of high yielding and high protein varieties of soy by induced mutagenesis.] (In „Genetika i selektsiya rastenii i zhivotnykh v Kazakhstane,...”) Akilov, U. Union of Soviet Socialist Republics, Kazakhskoe Obshchestvo Genetikov i Seleksionerov im. N. I. Vavilova pp. 152-157 (1974) [Ru] Alma-Ata, USSR; Izdatel'stvo 'Kainar' [Kazakhskii Nauchno-issled. Inst. Zemledeliya, USSR]

Use of γ -irradiation from a ^{60}Co source showed that mutants of 3 basic soy var. with high protein and reduced fat contents could be obtained. HBr

221

Annual Report 1974/1975. [Book] Netherlands, Sprenger Instituut 75pp. (1974/1975) [many ref. En] Wageningen, Netherlands; Institute for Research on Storage and Processing of Horticultural Produce

This annual report gives a short survey of current research carried out at the Institute on quality of frozen vegetables, preparation of fruit juices and sauerkraut, food technological processes and water pollution, quality of processed vegetables and apples; packaging, distribution and storage of fresh fruit and vegetables, and antimicrobial activity of onions. [See FSTA (1975) 7 11J1661 for 1973 report.] HBr

222

Food products formulary. Vol. 3. Fruit, vegetable and nut products. [Book]

Tressler, D. K.; Woodroof, J. G. xi + 278pp. ISBN 0-87055-202-3 (1976) [En] Westport, Connecticut, USA; AVI Publishing Co., Inc. Price \$33.00 (USA) \$34.00 (Foreign)

This volume presents formulas and methods of making and preserving many different fruit, vegetable and nut products and sauces. The formulas included in the book have 3 characteristics, as contrasted to kitchen recipes: they are or have possible commercial applications; are in relatively large quantities; and utilize mechanical equipment insofar as possible. The following sections are included: Fruit beverages and purees (pp. 1-30); Canned fruits (pp. 31-37); Fruit flavors, concentrates, and essences (pp. 38-60); Dried, dehydrated, and dietetic fruit products (pp. 61-67); Frozen fruits (pp. 68-75); Jams, jellies, marmalades, and preserves; candied and glaceed fruits; fruit syrups and sauces (pp. 76-98); Fruit butters, fruit sauces, spiced and pickled products (pp. 99-105); Specialty fruit items and confections (pp. 106-122); Vegetable beverages and purees (pp. 123-128); Canned vegetables (pp. 129-138); Dried and dehydrated vegetables (pp. 139-151); Frozen vegetable products (pp. 152-166); Vegetable pickles and spiced products (pp. 167-180); Vegetable base dressings and dips (pp. 181-193); Vegetable soups, sauces, and sauced products (pp. 194-216); Specialty vegetable items (pp. 217-226); Almond products (pp. 227-232); Peanut

products (pp. 233-240). [Continued in following abstr.] VJG

223

Food products formulary. Vol. 3. Fruit, vegetable and nut products. [Book]

Tressler, D. K.; Woodroof, J. G. xi + 278pp. ISBN 0-87055-202-3 (1976) [En] Westport, Connecticut, USA; AVI Publishing Co., Inc. Price \$33.00 (USA) \$34.00 (Foreign)

[Continued from preceding abstr.] and Miscellaneous nut products: chestnuts, filberts (hazelnuts), pecans, walnuts (pp. 241-249). An appendix presents: Data for preparing jellies conforming to Federal Regulations using fruit juices of different soluble solids concn. (crab apple; apricot, cherry, all plum, grape, pineapple; apple, quince; orange; cranberry, loganberry, red raspberry, red currant; blackberry, youngberry, boysenberry, dewberry; grapefruit, prickly pear; black raspberry; strawberry; and guava) (pp. 251-260); Spice and herb chart (pp. 261-264); and Herbs, peppers, spices, seeds and seasoning and how to use them (pp. 265-268). VJG

224

[Technology of storage and treatment of fruit and vegetables.] Technologia przechowywania i uszlachetniania owocow i warzyw. [Book] Drozdowicz, M.

239pp. (1976) [105 ref. Pl] Warsaw, Poland; Zaklad Wydawnictw CRS. Price 49zl

Results of studies of a series of research workers are included. Storage techniques and equipment are dealt with, as well as the designs of modern warehouses and storage methods applied to individual fruit and vegetables during short- and long-term storage. Treatment of fruit and vegetables, packaging and transportation are also discussed. The book includes the following chapters: Factors affecting keeping quality of fruit and vegetables during storage (pp. 10-34); Warehouses and their equipment (pp. 34-97); Warehousing technology (pp. 97-170); Treatment and trimming technology (pp. 173-203); Storage and treatment costs (pp. 209-218); and Future trends (pp. 213-218). STI

225

[Peppers.] Le poivron. [Book]

France, Association pour la Promotion Industrie-Agriculture

33pp. (1974) [20 ref. Fr] Paris, France (London, UK; Food Trade Press) Price £4.50

The subject is covered in the following chapters: General aspects; cultivation and utilization of peppers (pp. 1-10); Chemical characteristics and main properties of peppers (pp. 10-15); and Commercial uses of peppers (as vegetable, condiment, source of oleoresin) (pp. 15-28). HBr

226

The fruits of the earth. [Book]

Bianchini, F.; Corbetta, F.

303pp. ISBN 0-304-29482-9 (1976) [12 ref. En]
London, UK; Cassell & Company Ltd. Price £9.50

This beautifully produced and illustrated book, a translation of the original Italian, describes plants which are grouped into categories according to use. The 110 colour plates are supplemented by outline diagrams to illustrate the scientific aspects of the plants, thereby considerably enhancing the overall value of the book. The authors, the curator at the Natural History Museum, Verona and a botanist at the University of Bologna, give the origin of the plants, examine the areas in which they flourish, their uses and composition, their relation to nutrition and health, the var. available and many other little-known horticultural facts. The plants are grouped as follows: Cereals (pp. 16-29); Vegetables (pp. 30-117); Fungi (pp. 118-125); Fruit (pp. 126-199); Herbs and spices (pp. 200-215); Stimulants (pp. 216-219); and Starch- and oil-yielding plants (pp. 220-239). A useful glossary of botanical terms is included, and an appendix (pp. 242-295) containing the botanical classification and characteristics of each plant is given. VJG

227

[Freeze-drying of food products of vegetable origin.] Sublimatsionnaya sushka pishchevykh produktov rastitel'nogo proiskhozhdeniya. [Book] Popovskii, V. G.; Bantys, L. A.; Ivasyuk, N. T.; Grinberg, N. Kh.; Gorshunova, G. B. 335pp. (1975) [Ru] Moscow, USSR: Pishchevaya promyshlennost' Price 1.03r

This book, intended for technologist working in the fruit and vegetable processing industry, includes the following chapters: Present knowledge of the freeze-drying of food products of vegetable origin (pp. 8-49); Freezing - the preparatory stage in the preparation of vegetable raw materials before freeze-drying (pp. 50-103); Technology of freeze-drying of food products of vegetable origin (pp. 109-179); Quality changes in fruits during freeze-drying and storage (pp. 180-223); Physicochemical, biochemical, mechanical and structural characteristics of dehydrated products, and methods for their evaluation (pp. 224-278); Methods of intensifying the freeze-drying of foods (pp. 279-309); and Organization of commercial production of freeze-dried foods (pp. 301-333). STI

228

Crop production in Europe. [Book]

Eddowes, M.

vi + 318pp. ISBN 0-19-859460-7 (paperback) & ISBN 0-19-859444-5 (casebound) (1976) [many ref. En] London, UK; Oxford University Press Price £4.00 (paperback); £8.00 (casebound) [Crop Dep., Harper Adams Coll., Shropshire, UK]

This book is concerned with the production of temperate crops under Western European conditions. Information presented under the

commodity headings relates to production, seed, planting, fertilizers, cultural systems, crop protection, and harvesting. The present economic state of crop production in the European Economic Community is reviewed in Chapter 1 (pp. 1-16, 7 ref.). It is divided into 2 parts: Technical and applied scientific aspects (pp. 17-265); and Economic aspects (pp. 270-297). Chapters included are: Introduction (pp. 19-20); Seed and seed management (pp. 21-27, 16 ref.); Fertilizers and manures (pp. 28-39, 12 ref.); Cultivation, drainage, and irrigation (pp. 40-61, 16 ref.); Crop protection (pp. 62-96, 60 ref.); Plant growth regulators (pp. 97-99, 4 ref.); Sequences of cropping (pp. 100-103, 1 ref.); Cereals (including grain drying and storage, quality, and uses) (pp. 104-129, 32 ref.); Intensive cereal production (pp. 130-141, 14 ref.); Potatoes (including potatoes produced for processing, storage, and grading) (pp. 142-191, 72 ref.). [Continued in following abstr.] VJG

229

Crop production in Europe. [Book]

Eddowes, M.

vi + 318pp. ISBN 0-19-859460-7 (paperback) & ISBN 0-19-859444-5 (casebound) (1976) [many ref. En] London, UK; Oxford University Press

Price £4.00 (paperback); £8.00 (casebound) [Crop Dep., Harper Adams Coll., Shropshire, UK]

[Continued from preceding abstr.] Sugar beet (including quality and by-products) (pp. 192-214, 30 ref.); Peas, beans, and carrots (including quality, drying and storage) (pp. 215-241, 18 ref.); Brassicas (pp. 242-258, 14 ref.); Cereal fodder crops (pp. 259-266, 17 ref.); Introduction to economic aspects (p. 269); Crop organization and management considerations (pp. 270-284, 26 ref.); and some financial aspects of crop production (pp. 285-297, 9 ref.). 4 appendices are included: Meteorological data for regions of the European Economic Community (pp. 298-301); Examples of types of chemical fertilizers (p. 302); Area (in hectares) by variety of potatoes in the United Kingdom (p. 303); and British and metric (or SI) units and conversion tables (pp. 304-305). VJG

230

Citrus growing in Florida. [Book]

Ziegler, L. W.; Wolfe, H. S.

x + 246pp. ISBN 0-8130-0488-8 (1975) [En] Gainesville, Florida, USA; University of Florida Press Price \$10.00

This revised edition of the book, published originally in 1961, contains 12 chapters dealing with various aspects of citrus growing. Chapters include: The kinds of citrus fruits (pp. 12-62), and The crop - harvesting, maturity, and grade (pp. 217-231). AL

231

[Technology of fruit distillation.] Technologie der Obstbrennerei. [Book]

Pieper, H. J.; Bruchmann, E.-E.; Kolb, E.
420pp. ISBN 3-8001-5808-6 (1977) [De]
Stuttgart, Federal Republic of Germany; Verlag
Eugen Ulmer Price DM68.00 [Univ., Hohenheim,
Federal Republic of Germany]

This comprehensive textbook of distillation of fruit brandies includes the following chapters: Basic chemical and biochemical principles of distillery technology (pp. 15-52); Basic microbiological principles of distillery technology (pp. 53-92); Raw materials for fruit distilleries (pp. 93-165); Distillery equipment and special processing aspects (pp. 166-233); Water preparation (pp. 234-241); Management [with special reference to practical aspects of mashing, fermentation and distillation] (pp. 242-325); Causes and control of defects in fruit brandies (pp. 326-341); Analytical methods and process control (pp. 342-391); and Processing of starch-containing raw materials (pp. 392-399). A 4-pp. bibliography and a 14-pp. subject index are included. AJDW

232

Producing vegetable crops. [Book]

Ware, G. W.; McCollum, J. P.
Ed. 2, xviii + 599pp. (1975) [many ref. En]
Illinois, USA; The Interstate Printers & Publishers,
Inc.

This book deals with the principles, economics and production practices of vegetable growing. It is a practical guide for vegetable growers and is widely used in horticulture and vegetable study courses. Section 1 of the book covers basic information and fundamental principles, and includes chapters entitled: Storing vegetables (pp. 185-196, 42 ref.) and Harvesting, handling, and marketing (pp. 197-221, 26 ref.). Section 2 discusses production practices, with chapters devoted to individual crops (asparagus, snap and lima beans, cabbage, carrots, celery, sweet corn, cucumbers, lettuce, muskmelons, onions, peas, peppers, potatoes, root crops, spinach, sweet potatoes, tomatoes, watermelon, other vegetables, and controlled-environment agriculture); harvesting, handling and marketing aspects are covered for each vegetable. AL

233

Plant growth regulators. Chemical activity, plant response, and economic potential. [Book]

Stutte, C. A. (Editor)
Advances in Chemistry Series 159, vii + 94pp.
ISBN 0-8412-0344-X (1977) [many ref. En]
USA, Washington DC; American Chemical Society
Price \$15.00 [Univ. of Arkansas, Fayetteville,
Arkansas 72701, USA]

Papers presented at a symposium co-sponsored by the Division of Pesticide Chemistry and the Plant Growth Regulator Working Group at the 170th Meeting of the American Chemical Society, Chicago, Illinois, Aug. 27-29, 1975, include: Fruit

abscission and chemical aids to harvest, by R. H. Biggs & S. K. Murphy (pp. 23-32, 109 ref.); and Plant growth regulator potential on sugarbeets, by E. F. Sullivan (pp. 68-71). A further paper is abstracted separately [see following abstr.]. AL

234

[Microbiology of foods of vegetable origin.]

Mikrobiologie pflanzlicher Lebensmittel. [Book]
Müller, G.

Ed. 2, 324pp. (1977) [370 ref. De] Leipzig,
German Democratic Republic; VEB
Fachbuchverlag [Sektion Nahrungsgüterwirtschaft &
Lebensmitteltech., Humboldt Univ., Berlin (GDR)]

This second edition of this useful textbook, intended for use in undergraduate courses, includes the following chapters: Fruit and fruit products (pp. 19-81); Vegetables and vegetable products (pp. 82-122); Potatoes (pp. 123-129); Edible fungi (pp. 130-133); Sugar, confectionery and honey (pp. 134-146); Cereals, flour, bakery products and starch (pp. 147-170); Fats, oils and fat-rich foods (pp. 171-176); Herbs and spices (pp. 177-184); Drinking water (pp. 185-198); Non-alcoholic beverages (pp. 199-206); Alcoholic beverages (pp. 207-243); Coffee, tea, cocoa and tobacco (pp. 244-248); Use of microorganisms for production of organic acids, fats, amino acids, proteins, enzymes and vitamins (pp. 249-290); and Production and processing of algae and algal products for food and feed uses (pp. 291-295). A 15-pp. bibliography and a 13-pp. subject index are given. AJDW

235

Wastewater treatment. Pollution abatement in the fruit and vegetable industry. [Book]

CH2M HILL
vi + 148pp. (1976) [18 ref. En] [200 SW Market
Street, Portland, Oregon 97201, USA]

This book, prepared by CH2M HILL for Food Processors Institute and sponsored by the US Environmental Protection Agency, Office of Technology Transfer, is intended to give food processors a general understanding of pollution control technology in order to deal more effectively with regulatory agencies and their own waste disposal situations. It deals with important waste characteristics, EPA and state regulations, sewer ordinances, pretreatment technology, treatment technology required to meet present and future effluent requirements (including guidelines which became effective May 17, 1976), land treatment disposal methods, general costs of pollution control, and sludge and solid residuals disposal methods. General design criteria are presented cost summaries are given for the more significant treatment processes. AL

236

Potatoes: production, storing, processing. [Book]
Smith, O.
Ed. 2, xi + 776pp. ISBN 0-87055-224-4 (1977)
[many ref. En] Westport, Connecticut, USA; AVI
Publishing Co. Inc. [Cornell Univ., Ithaca, New
York, USA]

This comprehensive book summarizes modern contributions on potatoes as related to the potato industry in America. It is based on almost 50 yr of library and biological research and experimentation, mostly carried out at Cornell University Agricultural Experiment Station and New York State College of Agriculture and Life Sciences. Chapters are: Origin and history of the potato (pp. 1-7); Origin and distribution of the United States potato crop (pp. 8-27); Structure of the potato plant (pp. 28-34); Dormancy (pp. 35-76); Chemical composition of the potato (pp. 77-144); Soils and organic matter in potato production (pp. 145-158); Seed value of potato tubers (pp. 159-185); Potato varieties (pp. 186-198); Soil preparation and planting (pp. 199-221); Mineral nutrition of the potato (pp. 222-302); Cultivating and the control of weeds (pp. 303-330); Environmental factors (pp. 331-404); Seed potato certification (pp. 405-416); Harvesting potatoes (pp. 417-435); Storage of potatoes (pp. 436-469); Grading, packaging and marketing potatoes (pp. 470-505); Potato diseases (pp. 506-549); Potato insects and their control (pp. 550-605); Culinary quality and nutritive value of potatoes (pp. 606-676); Potato processing (pp. 677-724); and Potato breeding and improvement (pp. 725-754). Numerous references follow each chapter, and the book contains a 9pp. appendix and a 12pp. subject index. AL

237

The role of citrus in health and disease. [Book]
Krehl, W. A.
vii + 118pp. ISBN 0-8130-0532-9 (cloth); 0-8130-0571-x (paperback) (1976) [196 ref. En]
Gainesville, Florida; University of Florida Press.
Price \$6.50 (cloth); \$2.95 (paperback) [Dep. of
Community Health & Preventive Med., Jefferson
Med. Coll., Philadelphia, Pennsylvania, USA]

The author presents a broad coverage of scientific information about nutrition and its relation to citrus products. Literature concerning ascorbic acid, folic acid and K nutriture in man is particularly emphasized in view of the significant dietary contributions made by citrus. Chapters in the book include: The role of nutrition in maintaining health and preventing disease (pp. 5-18); Citrus nutritive (pp. 19-37); Nutritional status of 4 age groups (pp. 38-55); Nutrition and health problems (pp. 56-76); and Current controversies (pp. 77-85). The appendix (pp. 87-105) includes tables showing recommended daily allowances for vitamins and minerals, Florida production of citrus concentrates, effect of different storage times and

temp. and of boiling on ascorbic acid in fresh orange juice or ascorbic acid solution, and composition of various raw, processed and prepared citrus fruits and juices. AL

238

Proceedings, Second Tomato Quality Workshop.
[Conference Proceedings]
United States of America, University of California;
United States of America, California Fresh Market
Tomato Advisory Board
200pp. (1976) [En] Davis, California, USA;
University of California, Department of Vegetable
Crops

The Second Tomato Quality Workshop, the proceedings of which are issued as No. 178 in the Vegetable Crops Series published by the University of California, was held on July 12-14, 1976 at the University of California, Davis, and sponsored by the University of California and the California fresh market tomato industry. It included the following papers: Structure and development of the tomato fruit, by A. R. Spurr (pp. 4-7); Basic principles of sensory evaluation, by M. Holton (pp. 118-122); Sensory evaluation of volatiles, by A. C. Noble (pp. 123-124); Profile technique for evaluating tomato quality, by A. E. Watada & B. Aulenbach (pp. 125-128); Genetic potential for improving tomato quality, by M. A. Stevens (pp. 159-163); Implications of tomato quality for the commercial breeder, by C. Nichols (pp. 164-165); and Contribution of the tomato to human nutrition, by A. E. Watada (pp. 166-170). A further 21 papers are abstracted individually, and are in the FSTA author index under United States of America, University of California [Tomato Quality Symposium]. RM

239

[Production of dried vegetables, potatoes and fruit.]
Proizvodstvo sushenykh ovoshchei, kartofelya i
plodov. [Book]
Kats, Z. A.
197pp. (1976) [8 ref. Ru] Moscow, USSR;
Pishchevaya Promyshlennost'. Price 0.34r

This book represents a text-book for students of specialized professional schools. The following chapters are included: Potatoes, vegetables and fruit as raw materials for the drying process (pp. 5-32); Treatment of the raw material (pp. 32-90); Potatoes, vegetables and fruit drying (pp. 90-155); Sorting, briquetting, packaging and storage of finished products (pp. 155-165); Manufacture of dried potato, vegetable and fruit products (pp. 165-186); and Dehydrated vegetables and fruit quality, and technical and chemical processing control (pp. 186-195). STI

240

[Frying of vegetables and automation of frying pans.]
Protseess obzharivaniya ovoshchei i
avtomatizatsiya obzharochnykh pechei. [Book]

Mal'skii, A. N.

159pp. (1976) [29 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.52r

The following chapters are included: Properties of vegetables and of oils (pp. 6-14); Processes taking place in vegetables and in oils during frying (pp. 14-46); Heat exchange during the frying process (pp. 46-62); Factors affecting the quality of fried vegetables and oil, and oil consumption (pp. 62-134); and Calculating the parameters of frying equipment (pp. 134-152). STI

SUGARS AND STARCHES

241

[Methods for analysis of materials used in the syrup industry.] Metody issledovaniya materialov v sakharnom proizvodstve. [Book]

Khvalkovskii, T. P.; Rabinovich, I. B.; Shapiro, A. I.; Zakharova, I. V.; Zakharova, T. V. 251pp. (1976) [Ru] Moscow, USSR; Pishchevaya Promyshlennost' Price 0.77r

This practical manual, intended for chemists and technologists in the sugar industry, summarizes the technical requirements of the materials used, and sampling techniques. It includes the following chapters: Water (pp. 3-82); Fuels (pp. 83-114); Oils and other lubricants (pp. 115-143); Limestone and chalk (pp. 144-161); Lime (pp. 162-166); Filtration materials (pp. 167-182); Filtration perlite (pp. 183-186); Sodium triphosphate (pp. 187-189); Soda (pp. 190-191); Hydrochloric acid (pp. 192-196); Formalin (pp. 197-199); Chloride of lime (pp. 200-201); Sulphur (pp. 202-203); Table salt (pp. 204-205); Activated charcoal (pp. 206-213); Ion exchange resins (pp. 214-215); Filtration tissues (pp. 216-222); Sugar bags (pp. 223-227); Preparation of special chemical reagent solutions (pp. 228-241); and Safety aspects of technical analyses (pp. 242-243). STI

242

Proceedings XV Congress 13-29 June, 1974.

Durban, South Africa. Volume 2. [Conference proceedings]

Dick, J.; Collingwood, D. J. International Society of Sugar Cane Technologists (Editors)

Proceedings of the International Society of Sugar Cane Technologists Vol. 2, 634pp. (1974) [many ref. En, es]

This volume includes the full text of papers on agronomy, plant physiology and agricultural engineering presented at this symposium. 9 papers giving data for sugar cane or sugar juice quality are abstracted separately in FSTA, and are in the subject index under International Society of Sugar Cane Technologists [15th Symposium]. [See FSTA

(1976) 8 12L967 and 12L968 for Vol. III of this symposium.] AJDW

243

Specialized sugars for the food industry. [Book] Johnson, J. C.

Food Technology Review, Noyes Data Corporation No. 35, xii + 360pp. ISBN 0-8155-0632-5 (1976) [En] Park Ridge, New Jersey, USA; Noyes Data Corp. Price \$39.00

This book is based on US patents issued since the late 1960s that deal with specialized sugars used by the food industry. Chapters included are: Introduction (pp. 1-2); Invert sugars (pp. 3-30); Low dextrose syrups (pp. 31-59); High dextrose syrups (pp. 60-89); Solid dextrose (glucose) (pp. 90-129); Fructose - enzymatic production (pp. 130-167); Fructose - other processes (pp. 168-201); Maltose and lower oligosaccharides (pp. 202-237); Xylose (pp. 238-250); Lactose (pp. 251-263); Lactulose (pp. 264-277); Other sugars and derivatives (pp. 278-301) including maple sugar, honey, sorbose ketals, raffinose, gentiobiose, D-arabinose, D-ribose, L-sorbose, mannose, and sugar blends; Miscellaneous sugar processes (pp. 302-312); Sugar alcohols and derivatives (pp. 313-338) including mannitol, maltitol, xylitol and isomaltitol; and Sugar acids and derivatives (pp. 339-351). Company, inventor and patent number indexes are included. VJG

244

Examination and analysis of starch and starch products. [Book]

Radley, J. A. (Editor)

vii + 220pp. ISBN 0-85334-692-5 (1976) [many ref. En] Barking, Essex, UK; Applied Science Publishers Ltd. Price £15.00

This book covers important changes resulting from recent technological developments and the examination of new starch products which have become available. Chapters in the book are: The microscopy of starch, by G. E. Moss (pp. 1-32, 36 ref.); Electron microscopy of starch and starch products, by D. J. Gallant & C. Sterling (pp. 33-59, 129 ref.); The rheology of starch, by A. H. A. de Willigen (pp. 61-90, 162 ref.); Physical methods of characterising starch, by J. A. Radley (pp. 91-131, 144 ref.); Chemical analysis of raw and modified starches, by F. A. Lyne (pp. 133-165, 82 ref.); Determination of starch in various products, by F. A. Lyne (pp. 167-188, 113 ref.); and The analysis of starch derivatives, by J. van der Bij (pp. 189-213, many ref.). AL

245

[Microbiology and microbiological control in beet sugar production.] Mikrobiologiya i mikrobiologicheskii kontrol' v

sveklisakharnom proizvodstve. [Book]

Nakhodkina, V. Z.

92pp. (1975) [Ru] Moscow, USSR; Pishchevaya promyshlennost'. Price 0.32r

This book, intended for students and those working in the sugar industry, contains the following chapters: Microflora of beet sugar production (pp. 4-37); Microbiological study and control of beet sugar production (pp. 38-63); Disinfectants and methods of disinfection (pp. 64-73); Methods of preventing bacterial contamination in sugar beet processing plants (pp. 74-82); and Supplements (pp. 83-88). STI

246

[Centrifuges in the sugar industry.] Sovremennye tsentrifugi v sakharnoi promyshlennosti. [Book] Tereshin, B. N. 120pp. (1975) [Ru] Moscow, USSR; Pishchevaya promyshlennost'. Price 0.34r

This book, intended for technicians working in the sugar industry, contains the following chapters: Theory of centrifugation of massecluttes (pp. 4-27); Automatic batch centrifuges (pp. 28-85); Continuous centrifuges (pp. 85-112); and Calculation of capacity of the centrifuge department of sugar plants (pp. 113-115). STI

247

[Technological equipment in confectionery plants.] Tekhnologicheskoe oborudovanie predpriyatii konditerskoi promyshlennosti. [Book] Lunin, O. G.; Chernovannik, A. Ya. 343pp. (1975) [Ru] Moscow, USSR; Pishchevaya promyshlennost'. Price 1.16r

This book contains the following chapters: Equipment for thermal processing of raw materials and semi-manufactured products, and industrial pumps (pp. 9-54); Equipment for the manufacture of toffees and coated sweets (pp. 54-95); Equipment for the manufacture of dragees (pp. 96-151); Equipment for the manufacture of chocolate (pp. 152-211); Equipment for the manufacture of bakers' confectionery products (pp. 212-264); Equipment for the manufacture of confectionery products containing jam and other fillings (pp. 265-302); and Packaging and packaging machines (pp. 303-340). STI

248

Starch production technology. [Book] Radley, J. A. (Editor) viii + 587pp. ISBN 0-85334-662-3 (1976) [many ref. En] Barking, Essex, UK: Applied Science Publishers Ltd. Price £35.00

This book provides coverage of the practical aspects of starch production technology and deals with important changes and developments in this field which have taken place in recent years. It contains the following chapters: Starch processing machinery, by R. Besso (pp. 1-23); Centrifuges used in the starch industry, by T. A. Barker (pp. 25-43, 6 ref.); Evaporation and drum drying, by B. Shinn (pp. 45-69, 36 ref.); Drying, by P. J. Barr & D. J. Barr (pp. 71-90); Dust explosion hazards with starch and its derivatives (pp. 91-98, 10 ref.); Antiseptics and preservatives used in starch products (pp. 99-108, 51 ref.); The manufacture of

maize starch, by F. Berkhout (pp. 109-133, 89 ref.); The manufacture of potato starch by A. H. A. de Willigen (pp. 135-154, many ref.); The manufacture of wheat starch, by A. Jackson (pp. 155-187, 56 ref.); Tapioca, cassava or Brazilian arrowroot starch (pp. 189-212, 68 ref.); The manufacture of sweet potato starch (pp. 213-227, 96 ref.); The minor starches of commerce: the manufacture of rice, arrowroot and sago starch (pp. 229-245, 62 ref.); [continued in following abstr.]. JA

249

Starch production technology. [Book] Radley, J. A. (Editor) viii + 587pp. ISBN 0-85334-662-3 (1976) [many ref. En] Barking, Essex, UK: Applied Science Publishers Ltd. Price £35.00

[Continued from preceding abstr.] The manufacture of starch derivatives: general considerations (pp. 247-256, 4 ref.); Commercial separation of amylose and amylopectin from starch, by J. Potze (pp. 257-271, 65 ref.); The manufacture of dextrans and British gums, by W. Acton (pp. 273-293, 61 ref.); Production of microbial amalytic enzymes, by L. A. Underkofler (pp. 295-309, 67 ref.); The manufacture of dextrose sweetening agents from starch and derived products (pp. 311-397, many ref.); The production of chemicals from starch by fermentation processes, by L. A. Underkofler & L. B. Lockwood (pp. 399-422, 100 ref.); The manufacture and chemistry of dialdehyde starch (pp. 423-448, many ref.); The manufacture of modified starches (pp. 449-479, many ref.); The manufacture of esters and ethers of starch (pp. 481-542, many ref.); and The manufacture of inorganic esters of starch (pp. 543-572, many ref.). A subject index is included. JA

250

Up-to-date confectionery industries. [Book] Malik, R. K.; Dhirga, K. C. 140pp. (1975/1976) [En] Delhi, India; Small Industry Research Institute Price Rs30.00; \$8.00; £3.00

This book, the 37th Publication on Small Scale Industries, is largely concerned with recipes and methods of processing for a wide variety of confectionery and dairy products. It contains the following chapters: Introduction (pp. 9-11); Importance of food science (p. 12); Main components of food (pp. 13-18); Raw materials for confectionery (pp. 19-39); Formulations with manufacturing processes for various products of confectionery (pp. 40-58); Equipments required for confectionery (pp. 59-68); Candy (pp. 69-70); Manufacturing scheme of candy on small scale (pp. 71-76); High quality toffees (pp. 77-83); Characteristics of confectionery items (pp. 84-98); Cream (pp. 100-106); Condensed milk and milk powder (pp. 107-114); Khoa (pp. 115-116); Margarine (pp. 117-119); Cheese (pp. 120-128); Breakfast foods (pp. 129-133); Food preservation (pp. 134-136); and Directory section (pp. 137-140), which lists the names and addresses of firms

in India dealing in food products, manufacturing plant and machinery, and supplying raw materials. JA

251

[Lipids of cereal starches.] Die Lipide der Getreidestärken.

Becker, G.; Acker, L.

Book 61pp. ISBN 3-489-74614-7 (1976) [many ref. De] Hamburg, Federal Republic of Germany; Verlag Paul Parey [Städtisches Untersuchungsamt, Bielefeld, Federal Republic of Germany]

This book, number VI-5 in the series 'Starch handbook in individual monographs' produced under the general editorship of M. Ulmann [see FSTA (1976) 8 11L868 for number VI-4], contains the following chapters: Review of the development of research in the field of starch lipids (pp. 9-16); Analysis of starch lipids (pp. 16-23); The lipids of wheat starch (pp. 24-29); The lipids of other cereal starches (pp. 29-34); Changes in the lipids of barley starch during growth (pp. 34-42); Characteristics of amylose-lysolecithin compounds (pp. 43-47); Importance of starch lipids for the viscosity of starch gels and the keeping quality of bakery products (pp. 48-53); and Effect of the lipid content on the detn. of amylose in cereal starches (pp. 53-54). A bibliography and a subject index are included. JA

252

Industrial uses of starch and its derivatives. [Book] Radley, J. A. (Editor) vii + 268pp. ISBN 0-85334-691-7 (1976) [many ref. En] Barking, Essex, UK; Applied Science Publishers Ltd. Price £15.00

This book provides practical and theoretical details concerning the uses of starch in the adhesives, food, textile, paper and miscellaneous industries. Chapters include: Adhesives from starch and dextrin (pp. 1-50, 147 ref.); The food industry (pp. 51-115, 354 ref.); The role of starch in bread staling, by E. M. A. Willhoff (pp. 117-147, 190 ref); and Utilisation of the by-products of starch manufacture (pp. 253-258, 22 ref.). [See also FSTA (1977) 9 2L154 and 3L247 for books written contemporaneously by the same author and which together provide a wide coverage of starch technology and chemistry.] AL

253

[Mathematical modelling of thermal processes in the sugar industry by use of computer.]

Matematicheskoe modelirovanie na EVM teplovykh komplekskov sveklosakharnogo proizvodstva. [Book]

Spinul, N. M.; Liberman, I. G.

221pp. (1975) [126 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.64r

Using sugar production as an example, methods of mathematical modelling of thermal processes (e.g. evaporation, crystallization, diffusion) using computers are demonstrated. The following

chapters are included: Characteristics of thermal processes (pp. 14-41); Criteria for the most favourable thermal process (pp. 41-56); Mathematical expression of thermal processes (pp. 56-100); Mathematical model of thermal processes (pp. 100-134); Algorithms for thermal process modelling and preparation of basic information (pp. 134-160); Modelling of thermal processes for plant design (pp. 160-187); and Modelling of thermal processes for plant reconstruction purposes (pp. 187-213). STI

254

[Continuous boiling and crystallization of sugar.]

Nepreryvnaya varka i kristalizatsiya sakhara.

[Book]

Gulyi, I. S.

268pp. (1976) [441 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 1.93r

This book represents results of theoretical and experimental work. It includes the following chapters: Principles of continuous production of the raw mass (pp. 6-37); Operation of a crystallizer (pp. 37-76); Study of processes in the crystal growing chamber (pp. 76-113); Analysis of alternative equipment for continuous massecuite production (pp. 113-141); Apparatus for continuous boiling of massecuite (pp. 141-169); Pilot-plant model of continuous vacuum apparatus, and practical testing (pp. 169-185); Commercial studies of continuous massecuite production equipment (pp. 185-204); Commercial continuous vacuum equipment of the KTIPP system (pp. 204-218); and Operation of cooled crystallizers (pp. 218-245). STI

255

[Selected methods in starch chemistry.] Izbrannyye metody issledovaniya krakhmala. [Book]

Rikhter[Richter], M.; Augustat, Z.;

Shirbaum[Schierbaum], E.

183pp. (1975) [1156 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 1.43r

This translation from the German (Ausgewählte Methoden der Stärkechemie) includes the following chapters: Starch polysaccharides (pp. 5-7); Starch production from vegetable material (pp. 7-14); Production and fractionation of starch polysaccharides (pp. 14-30); Modification, splitting and production of starch polysaccharides (pp. 30-46); Detn. of foreign substances in starch (pp. 46-59); Quantitative detn. of starch polysaccharides (pp. 59-75); Identification and detn. of saccharides in starch products (pp. 75-82); Methods for characterization of starch grain composition (pp. 82-91); Methods for detn. of the starch swelling process (pp. 91-105); Detn. of splitting rate of starch polysaccharides (pp. 105-128); Mol. wt. (pp. 128-159); Detn. of amylase in the presence of amylopectin (pp. 159-164); Detn. of polysaccharides by chromatography (pp. 164-175); and List of monographs and reviews (pp. 175-178). [See FSTA (1969) 1 10L510 for the German edition.] STI

256

Cane sugar handbook. [Book]

Meade, G. P.; Chen, J. C. P.

Ed. 10, xviii + 947pp. ISBN 0-471-58995-0

(1977) [many ref. En] Chichester, Sussex, UK;

John Wiley & Sons Ltd. Price £35.00; \$59.00

This manual, the 10th edition of a classic work for sugar cane manufacturers and their chemists, is for use by beginners and by experienced sugar technologists, by workers in remote locations and in the best equipped laboratories. Sections deal with: Sugar and sugar cane, by J. E. Irvine (pp. 3-39); Raw sugar manufacture and refining (pp. 43-512); Analytical procedures (pp. 515-757); and Chemical control (pp. 761-821). Individual chapters are: Sugarcane (pp. 3-14, 19 ref.); Composition of cane and juice (pp. 15-29, 40 ref.); Economic aspects of the sugar industry (pp. 30-39, 17 ref.); Outline of process for manufacturing raw cane sugar (pp. 43-47, 7 ref.); Extraction of the juice (pp. 48-94, 62 ref.); Bagasse and its uses (pp. 95-108, 39 ref.); Purification of the juice. I - clarification reactions and control (pp. 109-139, 110 ref.), II - clarification apparatus and special processes (pp. 140-163, 27 ref.); Treatment of mud waters and clarified juice (pp. 164-179, 43 ref.); Chemical reagents in sugar processes (pp. 180-184, 16 ref.); Evaporation and heating, by T. W. Baker (pp. 185-234, 114 ref.); The crystallization of sugar (pp. 235-289, 46 ref.); Crystallization in motion (pp. 290-333, 81 ref.); Purging, packing, and warehousing the sugar (pp. 334-358, 32 ref.); Blackstrap molasses and edible syrups (pp. 359-377, 53 ref.); Keeping and refining qualities of raw sugar (pp. 378-404, 106 ref.); Microbiology of sugar manufacture and refining (pp. 405-422, 43 ref.). [Continued in following abstr.] AL

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Cane sugar handbook. [Book]

Meade, G. P.; Chen, J. C. P.

Ed. 10, xviii + 947pp. ISBN 0-471-58995-0

(1977) [many ref. En] Chichester, Sussex, UK;

John Wiley & Sons Ltd. Price £35.00; \$59.00

[Continued from preceding abstr.] Cane sugar refining: I - introductory, affination, clarification, by H. G. Gerstner (pp. 423-454, 54 ref.), II - decolorization, by F. G. Carpenter & M. A. Clarke (pp. 455-493, 126 ref.), III - crystallization and finishing, by H. G. Gerstner (pp. 494-512, 25 ref.); Polarimetry in sugar analysis (pp. 515-545, 46 ref.); Double-polarization methods (pp. 546-550, 12 ref.); Chemical methods in sugar analysis (pp. 551-568, 52 ref.); Density and total solids determination (pp. 569-594, 39 ref.); Determination of ash (pp. 595-602, 31 ref.); pH (pp. 603-612, 21 ref.); Color and turbidity in sugar products, by P. F. Meads (pp. 613-628, 67 ref.); Sampling and averaging (pp. 629-648, 24 ref.); Analysis of the sugarcane (pp. 649-657, 11 ref.); Analysis of the juice (pp. 658-665, 21 ref.); Analysis of the syrup, massecuites, and molasses

(pp. 666-676, 25 ref.); Analysis of sugars (pp. 677-687, 36 ref.); Examination of refined sugar (pp. 688-703, 56 ref.); Analysis of bagasse and press cake (pp. 704-712, 13 ref.); Sugar industry wastewater effluents and air emission (pp. 713-726, 27 ref.); Special laboratory reagents (pp. 727-733, 16 ref.); Special techniques for analysis of sugars and nonsugars, by M. A. Clarke & F. G. Carpenter (pp. 734-757, 149 ref.). [Continued in following abstr.] AL

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Cane sugar handbook. [Book]

Meade, G. P.; Chen, J. C. P.

Ed. 10, xviii + 947pp. ISBN 0-471-58995-0

(1977) [many ref. En] Chichester, Sussex, UK;

John Wiley & Sons Ltd. Price £35.00; \$59.00

[Continued from preceding abstr.] Definitions and terms in sugar factory control (pp. 761-768, 1 ref.); Chemical control (pp. 769-805, 37 ref.); Sugar house calculations (pp. 806-814); and Methods of cane purchase (pp. 815-821, 16 ref.). Reference tables (pp. 823-917) and an index (pp. 919-947) are included. AL

259

Sucrochemistry. A symposium held at the 172nd Meeting of the American Chemical Society, San Francisco, California, Aug. 31-Sept. 2, 1976.

[Conference proceedings]

Hickson, J. L. United States of America, American Chemical Society, Division of Carbohydrate Chemistry; International Sugar Research Foundation Inc. (Editor)

xvi + 381pp. ISBN 0-8412-0290-7 (1977) [many ref. En] Washington DC, USA Price \$20.00

This book, No. 41 in the ACS Symposium Series, contains papers presented at the symposium on sucrochemistry. The first section deals with concepts and basic discoveries (pp. 3-79), the next 3 sections illustrate some industrial applications of sucrochemistry, i.e. surfactant esters (pp. 83-158), surface coatings and other esters (pp. 161-233), and urethanes and fermentation sucrochemistry (pp. 237-324), and the final section deals with business aspects (pp. 327-373). Individual papers include: The concept of sucrochemistry, by H. B. Hass (pp. 4-8); Selective substitution of hydroxyl groups in sucrose, by L. Hough (pp. 9-21, 23 ref.); High resolution nuclear magnetic resonance spectroscopy, by L. D. Hall, K. F. Wong & W. Schittenhelm (pp. 22-39, 22 ref.); Some fundamental aspects of the chemistry of sucrose, by R. Khan (pp. 40-61, 59 ref.); Selective substitution of sucrose hydroxyl groups via chelates, by E. Avela, S. Aspelung, B. Holmbom, B. Melander, H. Jalonen & C. Peltonen (pp. 62-76, 10 ref.); Sucrose ester surfactants - a solventless process and the products thereof, by K. J. Parker, K. James & J. Hurford (pp. 97-114, 21 ref.); A sugar ester process and its applications in calf feeding and human food additives, by L. Bobichon (pp. 115-120, 5 ref.); [continued in following abstr.] AL

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Sucrochemistry. A symposium held at the 172nd Meeting of the American Chemical Society, San Francisco, California, Aug. 31-Sept. 2, 1976.

[Conference proceedings]

Hickson, J. L. **United States of America**, American Chemical Society, Division of Carbohydrate Chemistry; International Sugar Research Foundation Inc. (Editor)

xvi + 381pp. ISBN 0-8412-0290-7 (1977) [many ref. En] Washington DC, USA Price \$20.00

[Continued from preceding abstr.] Method for preparing esters of polyalcohols (sugar alcohols), by J. A. van Velthuisen, J. G. Heesen & P. K. Kuipers (pp. 136-144); Chemicals by fermentation - an overview, by R. Williams, Jr. (pp. 274-281); Single cell protein and the protein economy, by J. J. Wells (pp. 297-312, 11 ref.); and Can sucrose compete with hydrocarbons as a chemical feedstock? by W. J. Sheppard & E. S. Lipinsky (pp. 336-350, 7 ref.). A further 5 papers are abstracted separately and are in the FSTA author index under International Sugar Research Foundation Inc. [Sucrochemistry Symposium]. AL

261

[Production of lactose.] Proizvodstvo molochnogo sakkhara. [Book]

Khramtsov, A. G.; Kravchenko, E. F. 94pp. (1976) [5 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.16r

The following chapters are included: General information on lactose (pp. 5-10); Raw materials and main production methods (pp. 10-16); Principles of lactose production technology (pp. 16-19); Lactose production technology and equipment (pp. 29-61); Lactose quality testing, and lactose defects (pp. 61-80); Utilization of by-products (pp. 80-85); and Brief information on the organization of lactose manufacture (pp. 85-94). STI

262

[Production technology for candies and toffees.]

Tekhnologiya konfet i iris. [Book]

Karusheva, N. V.

148pp. (1976) [9 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.23r

This book, intended as a textbook for specialized secondary schools, includes the following chapters: Main kinds of raw materials and their preparation prior to processing (pp. 5-16); Production of candies (pp. 16-121); Toffee production (pp. 121-135); Hygiene and sanitation, and principles of technical and chemical control (pp. 135-139); Safety of personnel (pp. 139-143); and Laboratory practices (pp. 143-150). STI

CEREALS AND BAKERY PRODUCTS

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Genetic improvement of seed proteins.

[Conference proceedings]

United States of America, National Research Council, Board on Agriculture & Renewable Resources

ix + 394pp. ISBN 0-309-02421-8 (1976) [many ref. En] Washington, DC, USA; National Academy of Sciences Price \$15.25

This book contains the proceedings of a workshop held under the sponsorship of the Board on Agriculture and Renewable Resources, Commission on Natural Resources, National Research Council, on 18-20 March, 1974 at the National Academy of Sciences in Washington, DC. The purpose of the workshop was to present and consider current information on genetic improvement in the quality and quantity of seed protein in relation to human nutrition. The proceedings are divided into the following 4 sections, each section containing several individual papers and discussions of the papers: Seed protein use, development, and modification (pp. 3-98); Biochemical and biophysical limitations (pp. 99-250); Genetic regulatory mechanisms (pp. 251-368); and Review and summary (pp. 369-392). Individual papers are: The protein-calorie trade-off, by A. M. Altschul (pp. 5-17, 9 ref.), which examines the relationships between protein supply and total food supply; Production of vacuolar protein deposits in developing seeds and seed protein homology, by J. W. Dieckert & M. C. Dieckert (pp. 18-56, 68 ref.); Case histories of existing models, by E. T. Mertz (pp. 57-70, 25 ref.), which discusses the occurrence of the high-lysine syndrome in maize, barley and sorghum; Effects of genes that change the amino acid composition of barley endosperm, by L. Munck & D. V. Wettstein (pp. 71-82, 18 ref.); Plant breeding, molecular genetics, and biology, by G. F. Sprague (pp. 83-98, 1 ref.); Biochemical and biophysical limitations: introduction, by R. Rabson (pp. 101-102); [continued in following abstr.]. JA

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Genetic improvement of seed proteins.

[Conference proceedings]

United States of America, National Research Council, Board on Agriculture & Renewable Resources

ix + 394pp. ISBN 0-309-02421-8 (1976) [many ref. En] Washington, DC, USA; National Academy of Sciences Price \$15.25

[Continued from preceding abstr.] Nitrate and nitrate reductase as factors limiting protein

synthesis, by R. H. Hageman, R. J. Lambert, D. Loussaert, M. Dalling & L. A. Klepper (pp. 103-134, 28 ref.); Metabolic control of biosynthesis of nutritionally essential amino acids, by B. J. Mifflin (pp. 135-158, 62 ref.); Stress relationships in protein synthesis: water and temperature, by J. S. Boyer (pp. 159-171, 41 ref.); Interrelationships between carbohydrate and nitrogen metabolism, by D. T. Canvin (pp. 172-195, 48 ref.); Opportunities for improved seed yield and protein production: N_2 fixation, CO_2 fixation, and O_2 control of reproductive growth by R. W. F. Hardy, U. D. Havelka & B. Quebedeaux (pp. 196-230, 40 ref.), which outlines novel biological and abiological approaches that are being studied for improving N utilization by crops; Biochemistry of protein synthesis in seeds, by D. Boulter (pp. 231-250, 68 ref.); Genetic regulatory mechanisms: introduction, by S. B. Hendricks (pp. 253-254); Some aspects of the regulation of gene expression, by G. Zubay (pp. 255-273, 32 ref.), which reviews and updates some of the basic concepts and terminology in the field and discusses gene regulation by the operon model; Posttranscriptional regulation of protein synthesis, by J. M. Clark, Jr. (pp. 274-287, 34 ref.); Hormone-regulated synthesis of tissue-specific proteins, by A. R. Means, S. Woo, C. Bordelon, J. P. Comstock & B. W. O'Malley (pp. 288-308, 30 ref.); [continued in following abstr.]. JA

265

Genetic improvement of seed proteins.

[Conference proceedings]

United States of America, National Research Council, Board on Agriculture & Renewable Resources

ix + 394pp. ISBN 0-309-02421-8 (1976) [many ref. En] Washington, DC, USA; National Academy of Sciences Price \$15.25

[Continued from preceding abstr.]

Characterization of protein metabolism in cereal grain, by J. E. Varner, D. Flint & R. Mitra (pp. 309-328, 24 ref.), which covers protein synthesis in the aleurone layers and amino acid synthesis in the embryo; Messenger RNA synthesis and utilization in seed development and germination, by L. S. Dure, III (pp. 329-340, 24 ref.); Asexual approaches, including transgenesis and somatic cell hybridization, to the modification of plant genotypes and phenotypes, by C. H. Doy (pp. 341-358, 32 ref.); Cloning of eukaryotic DNA as an approach to the analysis of chromosome structure and function, by H. W. Boyer, R. C. Tait, B. J. McCarthy & H. M. Goodman (pp. 359-368, 27 ref.); Interpretive summary and review, by H. N. Munro (pp. 371-382, 12 ref.); and Interpretive summary and review, by O. E. Nelson (pp. 383-392, 11 ref.). JA

266

[Production of pastries.] Cukrarska výroba. [Book] Skoupil, J.; Havel, F.; Münzer, O. 317pp. (1976) [Cs] Prague, Czechoslovakia; SNTL. Price 18Kcs

This book deals with manufacture of pastries, fillings and coatings for pastries, ice creams, and the equipment used. It is intended as a textbook for students at specialized schools of food technology and for specialists working in the respective fields. It contains the following chapters: Quality of pastry production (pp. 11-13); Technical standardization (pp. 14-18); Storage and treatment of major raw materials and intermediate products (pp. 19-30); Fillings and coatings for pastry products (pp. 31-108); Fine pastries (pp. 109-225); Ovens (pp. 226-248); Packaging of pastry products (pp. 249-270); Vitamins in pastry products (pp. 271-274); Freezing and production of ice creams (pp. 275-287); Despatching of pastry products (pp. 288-291); Characteristics of working rooms for pastry production (pp. 292-306); Hygiene and sanitation in pastry production (pp. 306-313); and Safety at work in pastry production (pp. 314-316). STI

267

[Storage of cereals, legumes and oilseeds.]

Magazynowanie ziarna zboz nasion strączkowych i oleistych. [Book]

Bulsiewicz, T.; Matzke, W.; Smarzynski, E.; Swiatek, H.

462pp. (1975) [Pl] Warsaw, Poland; Wydawnictwa naukowo-techniczne. Price 75zł

This book is intended for technicians and apprentices within the food industry. It includes the following chapters: Morphology (pp. 9-23); General composition (pp. 24-33); Technical characteristics (pp. 34-61); Weeds and diseases of cereals (pp. 62-77); Physical properties of cereals, legumes and oilseeds (pp. 78-97); Biological processes in stored cereals (pp. 98-116); Physical properties of cereal products (pp. 121-131); Quality control of cereals and legumes (pp. 137-187); Pests in grain stores (pp. 188-222); Control of pests in warehouses (pp. 223-249); Types of warehouses and their equipment (pp. 253-349); Organization and techniques of cereals, legumes and oilseeds storage (pp. 350-384); Improving the quality and storage life of grain (pp. 384-425); Marketing and transportation of cereals and cereal products (pp. 425-451); and Control of weight and losses of cereals and cereal products during storage (pp. 451-462). STI

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Practical baking. [Book]

Sultan, W. J.

Ed. 3, xvii + 599pp. ISBN 0-87055-214-7 (1976) [22 ref. En] Westport, Connecticut, USA; AVI Publishing Co. Inc. [Food & Maritime Trades High School, New York, USA]

This 3rd edition [see FSTA (1970) 2 2M140 for 2nd edition] contains 4 new chapters relating to specialized areas of bakery food production, namely dietetic baking, baking with sour cream, passover recipes, and 'natural' type breads and bakery food products. The book is divided into the following 10 sections, each section containing several chapters: Ingredients and their properties (pp. 1-53); Bread and rolls (pp. 54-133); Sweet yeast dough products

and specialties (pp. 134-190); Biscuits and muffins (pp. 191-207); Doughnuts and crullers (pp. 208-224); Pies and pastries (pp. 225-309); Cakes and cake specialties (pp. 310-400); Cookies (pp. 401-459); Specialized baking (pp. 460-564); and Appendix (pp. 565-588). Individual chapters are: Sugars and their use in baking (pp. 1-4); Shortenings and their uses (pp. 5-10); Eggs - their composition and uses (pp. 11-16); Wheat and flour (pp. 17-23); Milk and its uses in baking (pp. 24-28); Yeast (pp. 29-33); Salts, flavors, and spices (pp. 34-38); Cocoa and chocolate (pp. 39-43); Chemical leavening agents (pp. 44-48); The staling of bakery products (pp. 49-53); Basic operations in bread making (pp. 54-60); Egg bread, French and Italian bread, hard and soft rolls (pp. 61-65); Rye bread varieties (pp. 66-70); Recipes for bread and rolls (pp. 71-133); Proper handling of sweet yeast dough (pp. 134-139); Recipes for sweet yeast dough products (pp. 140-190); Factors concerning biscuits and muffins (pp. 191-193); [continued in following abstr.]. JA

269

Practical baking. [Book]

Sultan, W. J.

Ed. 3, xvii + 599pp. ISBN 0-87055-214-7 (1976) [22 ref. En] Westport, Connecticut, USA; AVI Publishing Co. Inc. [Food & Maritime Trades High School, New York, USA]

[Continued from preceding abstr.] Recipes for biscuits and muffins (pp. 194-207); Factors concerning doughnuts and crullers (pp. 208-212); Recipes for doughnuts and crullers (pp. 213-224); Pie crusts and short doughs (pp. 225-229); Fruit pies and pie baking (pp. 230-235); Soft-filled pies (pp. 236-239); Puff pastry (pp. 240-245); Factors concerning cream puffs and eclairs (pp. 246-248); Recipes for pies and pastry (pp. 249-309); Cake mixing methods (pp. 310-314); Icings and toppings (pp. 315-320); Balancing cake recipes (pp. 321-324); Recipes for cakes and cake specialties (pp. 325-400); Factors concerning cookies (pp. 401-406); Recipes for cookies (pp. 407-459); Dietetic baking (pp. 460-477); Baking with sour cream (pp. 478-495); Passover recipes (pp. 496-511); and 'Natural' type breads and bakery food products (pp. 512-564). The appendix includes a table of approximate baking temp., conversion tables, a glossary of baking terms, a training programme for apprentice bakers, and a bibliography. A subject index is included. JA

270

Practical baking manual. [Book]

Sultan, W. J.

viii + 175pp. ISBN 0-87055-213-9 (1976) [En] Westport, Connecticut, USA; AVI Publishing Co. Inc. [Food Trades Dep., Food & Maritime Trades High School, New York, USA]

This practical manual for students and instructors is based upon the training programme appearing in the Appendix (pp. 575-586) of the 3rd edition of 'Practical baking' [see preceding abstr.], the objective of the manual being to assist the trainee

and instructor to achieve maximum results in the development of baking skill and knowledge. The first section of the book (pp. 1-103) consists of series of questions and practical assignments, relevant page numbers in 'Practical baking' being given for each question or assignment to assist the trainee. Topics covered by the questions and assignments include general bakeshop safety rules and practices, and preparation of soft roll dough, yeast-raised dough, bun dough, biscuit and muffin dough, pie dough and filling, cake mix, doughnuts, cookie dough, bread dough, and Danish and puff pastry. The 2nd section (pp. 104-151) gives guidance to instructors in the preparation of demonstration lessons. An appendix (pp. 152-175) gives the questions and model answers to a state approved comprehensive industrial examination. [See FSTA (1971) 3 2M177 for previous manual.] JA

271

[Biochemical and baking characteristics of potential new varieties of soft spring wheat from North Kazakhstan.] (In „Genetika i selektsiya rastenii i zhivotnykh v Kazakhstane,,)

Kuz'mina, M. V. Union of Soviet Socialist Republics, Kazakhskoe Obshchestvo Genetikov i Seleksionerov im. N. I. Vavilova pp. 110-120 (1974) [Ru] Alma-Ata, USSR: Izdatel'stvo 'Kainar' [Inst. Botaniki AN Kazakhskoi SSR, USSR]

Detailed tabulated data (covering contents of protein and gluten and ratios of albumins, glutelins, globulins and gliadins in the grain: flour alveograph and farinograph characteristics; and bread vol., porosity and general quality) are given for a total of 24 new local var. of soft winter wheat. The merits of individual var. for addition to other flours as improvers or fillers are discussed. HBr

272

Bakery technology. Book 1. Bread. [Book]

Jenkins, S. M.

xiii + 271pp. ISBN 0-919630-55-3 (1975) [En] Toronto, Canada; Lester & Orpen Ltd. Price \$19.95 [Fac. of Food Tech., George Brown Coll., Toronto, Canada]

This book covers all aspects of bread production and contains the following sections: Ingredients (pp. 5-91), including flour, water, yeast and minor ingredients; Processing methods (pp. 93-133); Equipment (pp. 135-196); Formulations (pp. 199-218); and Sanitation (pp. 221-254). 2 appendices are included, Bread and nutrition (pp. 257-258) and Evaluating fermented products (pp. 261-265), and a subject index. JA

273

Technology of cereals, with special reference to wheat. [Book]

Kent, N. L.

Ed. 2, xiv + 306pp. ISBN 0-08-018175-9 (Hardcover), 0-08-018177-5 (Flexicover) (1975) [many ref. En] Oxford, UK; Pergamon Press Ltd.

Price £6.00 (Hardcover), £4.40 (Flexicover) [Flour Milling & Baking Res. Ass., Chorleywood, Rickmansworth, Herts., UK]

This 2nd edition closely follows the plan of the 1st edition, published in 1966, with the addition of new material, the deletion of sections which are no longer relevant, and a general up-dating of information. It contains the following chapters: Cereals of the world: crops (pp. 1-25, 12 ref.); Cereals of the world: structure of cereal grains (pp. 26-42, 29 ref.); Chemical composition of cereals (pp. 43-73, many ref.); Wheats of the world (pp. 74-95, 18 ref.); Wheat: the farm crop (pp. 96-108, 16 ref.); Wheat at the mill: wheat cleaning and conditioning (pp. 109-125, 14 ref.); Wheat at the mill: flour-milling (pp. 126-147, 11 ref.); Flour (pp. 148-175, 31 ref.); Nutritional attributes of wheat, flour, bread (pp. 176-193, 37 ref.); Bread-baking technology (pp. 194-212, 37 ref.); Breakfast cereals and other processed products (pp. 213-225, 18 ref.); Barley: processing, nutritional attributes, technological uses (pp. 226-240, 24 ref.); Oats: processing, nutritional attributes, technological uses (pp. 241-255, 34 ref.); Rye triticales, rice: processing, nutritional attributes, technological uses (pp. 256-276, 28 ref.); and Maize, sorghum, millet: processing, nutritional attributes, technological uses (pp. 277-296, 24 ref.). A subject index is included. JA

274

[Improved treatment and milling of wheat and rye.] Sovershenstvovanie konditsionirovaniya i izmel'cheniya pshenitsy i rzhii. [Book] Naumov, I. A. 174pp. (1975) [18 ref. Ru] Moscow, USSR; Kolos. Price 0.81r

The following chapters are included: Structural and mechanical properties of wheat (pp. 5-60); Structural and mechanical properties of rye (pp. 61-74); Rheological properties of grain (pp. 74-153); and Kinetics of grain deformation and the milling process (pp. 154-173). STI

275

[Technology and techniques of mechanized manufacture of tarts and pies.] Tekhnologiya i tekhnika mekhanizirovannogo proizvodstva tortov i pirozhnykh. [Book] Istomina, M. M.; Taleisnik, M. A.; Teplova, R. V.; Tokarev, L. I. 252pp. (1975) [Ru] Moscow, USSR; Pishchevaya promyshlennost'. Price 1.06r

Modern methods and equipment for fancy bakery products manufacture (tarts, pies) are described, particularly with respect to foreign experience. The following chapters are included: Bulk storage and transportation of raw materials (pp. 6-16); Preparation of raw materials and semi-manufactured products (pp. 16-55); Dough formation process (pp. 55-118); Dough moulding and processing (pp. 119-138); Baking and cooling (pp. 139-179); Production of individual semi-manufactured products (pp. 180-188); Cutting and

trimming machines (pp. 189-211); and Machines for continuous production of cakes and fancy bakery products (pp. 212-246). STI

276

[Aroma of bread.] Aroma von Brot. [Book] Rothe, M. viii + 166pp. (1974) [626 ref. De] Berlin; Akademie-Verlag Price DM33.00 [Zentralinst. für Ernährung, Potsdam-Rehbrücke, German Democratic Republic]

This detailed monograph (Vol. I in the series 'Handbook of aroma analysis') includes the following chapters: General problems of aroma analysis (pp. 1-17); Chemistry and biochemistry of aroma formation in bread (pp. 17-44); Technological aspects of the aroma of bread (pp. 44-92); Effects of additives on the aroma of bread (pp. 92-107); Quantitative analysis of the aroma of bread (pp. 107-116); and Nutritional aspects of the aroma of bread [with reference to the significance of aroma for bread consumption, and the relative popularity of different bread types] (pp. 116-123). A 25-pp. bibliography, an 11-pp. author index and a 5-pp. subject index are included. AJDW

277

Rye: production, chemistry, and technology. [Book]

Bushuk, W. (Editor) 181pp. ISBN 0-913250-11-2 (1976) [many ref. En] St Paul, Minnesota, USA; American Association of Cereal Chemists Inc. Price \$15.00 [Dep. of Plant Sci., Univ. of Manitoba, Winnipeg, Manitoba, Canada]

This book, Volume 5 in the Monograph Series of the American Association of Cereal Chemists, is intended to be of use to persons interested in any aspect of rye. It contains the following chapters: History, world distribution, production, and marketing, by W. Bushuk (pp. 1-11, 8 ref.); Cytogenetics, plant breeding, and agronomy, by L. E. Evans & G. J. Scoles (pp. 13-26, many ref.); Diseases, pests, and physiology of rye, by S. Starzycki (pp. 27-61, 101 ref.); Morphology and chemistry of the rye grain, by D. H. Simmonds & W. P. Campbell (pp. 63-110, many ref.); Rye milling, by T. A. Rozsa (pp. 111-125, 24 ref.); and Bread-baking and other uses around the world, by E. Drews & W. Seibel (pp. 127-178, 100 ref.). A subject index is included. JA

278

Composite flour programme. Documentation Package. Vol. 1. [Book]

Chatelanat, R. P. Food & Agriculture Organization, Food & Agricultural Industries Service, Agricultural Services Division (Editor)

Ed. 2. 155pp. (1973) [many ref. En] Rome, Italy

The aim of the FAO composite flour programme, initiated in 1964, has been to determine through intensive research whether it is possible to produce a wide range of acceptable,

high quality, nutritious bakery, confectionery and paste goods from non-wheat flours and starches that can be or are being processed in the major wheat-importing developing countries. This publication covers relevant activities undertaken during the period 1964-1970 and contains the following sections: The FAO composite flour programme, by E. A. Asselbergs (pp. 5-10, En, Fr, Es), which outlines the aims of the programme and related research; A note about this publication (p. 11); Description of products displayed in colour photographs (pp. 12-15); Bulletins and reports published by FAO (pp. 17-67), which include Wheat and wheat flour import statistics [Table 30 from the FAO Trade Yearbook (1969) 23] (pp. 19-23), Bread from composite flours [Agricultural Services Bulletin (1969) No. 4; FSTA (1970) 2 10M971] (pp. 25-42, En, Fr, Es), and Study of making French-type bread by mechanical dough development mixing wheat flour with cassava starch and millet flour, by H. Perten [AGS: SN/SEN 5, Report of Consultant No. 1 (1969)] (pp. 43-67, En, fr, es, 8 ref.); [continued in following abstr.] JA

279

Composite flour programme. Documentation Package. Vol. 1. [Book]

Chatelanat, R. P. Food & Agriculture Organization, Food & Agricultural Industries Service, Agricultural Services Division (Editor)

Ed. 2, 155pp. (1973) [many ref. En] Rome, Italy

[Continued from preceding abstr.] Documents and reports of meetings held at FAO (pp. 69-97), which include the following 3 documents prepared for the FAO/Industry Cooperative Programme Meeting, FAO, Rome, 20-21 March 1969: Utilization of agricultural by-products and surplus crops in composite flours (pp. 73-74), Note on mechanically developed doughs from composite flours (p. 75) and Summary record of the Ad Hoc Working Group on Utilization of Agricultural By-products: extract on composite flours (pp. 77-78), the following 3 documents prepared for the FAO/Industry Cooperative Programme Meeting, FAO, Rome, 23-24 March 1970: Nutritional aspects of composite flours (pp. 81-82), Current field activities in composite flour development (pp. 83-84) and The composite flour concept: a scientific approach to satisfying a world need (pp. 85-86); Reports contributed by invited speakers and general committee representatives of the FAO/Industry Cooperative Programme (pp. 87-97), consisting of Research on high protein breads, by W. J. Hoover (pp. 89-91, 6 ref.), Composite flours - work conducted in the test bakery of the Tropical Products Institute, by D. A. V. Dendy (pp. 92-93), Development of composite flours, by G. Jongh (p. 94), Bread from composite flours - progress report with reference to Brazil, by C. van der Made (pp. 95-96) [continued in following abstr.] JA

280

Composite flour programme. Documentation Package. Vol. 1. [Book]

Chatelanat, R. P. Food & Agriculture Organization, Food & Agricultural Industries Service, Agricultural Services Division (Editor)

Ed. 2, 155pp. (1973) [many ref. En] Rome, Italy

[Continued from preceding abstr.] and Composite flours - a summary, by H. Meisel (p. 97); Reprints from technical journals (pp. 99-145), consisting of Bread from non-wheat flours, by J. C. Kim & D. de Ruiter (pp. 105-115, En, fr, es, 14 ref.) [Food Technology (1968) 22 (7) 867-878; FSTA (1969) 1 1M14], Bakery products with non-wheat flours, by J. C. Kim & D. de Ruiter (pp. 117-123, En, fr, es, 2 ref.) [Baker's Digest (1969) 43 58-63; FSTA (1969) 1 11M802], Mechanically developed doughs from composite flours, by W. Pringle, A. Williams & J. H. Hulse (pp. 127-131, En, fr, es, 4 ref.) [Cereal Science Today (1969) 14 (3) 114-129; FSTA (1970) 2 1M50] and The use of wheat and non-wheat flours in breadmaking, by D. A. V. Dendy, P. A. Clarke & A. W. James (pp. 133-145, En, fr, es, 6 ref.) [Tropical Science (1970) 12 (2) 131-142; FSTA (1971) 3 3M333]; and Forthcoming publications of the composite flour programme (pp. 147-153), which gives the provisional tables of contents for Documentation Package Vol. 2 and Vol. 3. JA

281

[Small size equipment for bakeries.]

Malogabaritnoe oborudovanie khlebopekarnykh predpriyatiy. [Book]

Tul'skii, N. V.; Teplitskii, E. V.; Rudenko, V. P.; Maslov, V. V.

271pp. (1976) [20 ref. Ru] Moscow, USSR: Pishchevaya Promyshlennost'. Price 1.16r

Design, assembly and application of Soviet and foreign equipment suitable for small bakeries are described. The following chapters are included: Classification of equipment at small bakeries (pp. 5-8); Equipment for bulk storage of flour (pp. 8-22); Equipment for pneumatic flour transportation (pp. 22-59); Flour sieving and conveying equipment (pp. 59-78); Equipment for reception, storage, treatment and transportation of supplementary materials (pp. 78-105); Metering equipment (pp. 105-129); Leaven and dough mixing equipment (pp. 129-155); Dough processing equipment (pp. 155-188); Dough moulding machines (pp. 188-200); Dough ripening machines (pp. 200-213); and Bakery ovens (pp. 213-263). STI

282

[Technical and chemical control in the baking industry.] Tekhno-khimicheskii kontrol'

khlebopekarnogo proizvodstva. [Book]

Chizhova, K. N.; Shkvarikova, T. I.; Zapenina, N. V.

479pp. (1975) [133 ref. Ru] Moscow, USSR;

Pishchevaya Promyshlennost'. Price 1.59r

The book includes the following chapters: The basic raw material of the baking industry - flour (pp. 5-113); Supplementary raw materials (pp. 113-238); Organization and control of technological processes (pp. 238-351); Finished products (pp. 351-435); and Buildings, equipment and laboratories (pp. 435-463). Present control methods for raw materials and finished products are described with respect to improved production of finished products. STI

283

[Microbiological control in the breadmaking industry.] Mikrobiologicheskii kontrol' khlebopekarnogo proizvodstva. [Book]

Afanas'eva, O. V.
142pp. (1976) [Ru] Moscow, USSR; Pishchevaya promyshlennost' Price 0.50r

This book, intended for students and technicians in baking industry control laboratories, includes the following chapters: Characteristics of microorganisms encountered in the breadmaking industry (pp. 6-63); Methods of microbiological control in the breadmaking industry (pp. 64-120); The microbiological laboratory (pp. 121-124); and Media for isolation, identification, storage and production of microorganisms (pp. 125-130). STI

284

Corn. Improvement, seed production, and uses. [Book]

Jugenheimer, R. W.
xvii + 670pp. ISBN 0-471-45315-3 (1976) [many ref. En] Chichester, Sussex, UK; John Wiley & Sons Ltd. Price £21.85; \$37.80 [Dep. of Plant Genetics, Univ. of Illinois, Urbana-Champaign, Illinois, USA]

This is a completely rewritten and expanded version of Hybrid Maize Breeding and Seed Production, published in 1958 by the FAO. The revised book should be valuable to scientists, students, seedsmen and those involved in corn production and the corn industry. The book is divided into 5 sections, which, with their individual chapters are: I. Corn is especially well-suited for research and development: The population-food dilemma (pp. 3-9); Maximum corn production depends on many factors (pp. 11-23); The corn plant (pp. 25-42); Genetics of corn (pp. 43-54); Heterosis (pp. 55-60); and Mutations are prime source of evolution (pp. 61-70). II. Breeding methods for corn improvement: Evolution of corn improvement (pp. 73-91); Hybrid corn breeding systems (pp. 93-109); Germ plasm for present and future use (pp. 111-120); Development of inbred lines (pp. 121-138); and Evaluating inbred lines (pp. 139-159). III. Selection for economic characteristics: Yield, maturity, and standability (pp. 163-184); Plant population, hazards, and mechanical harvesting (pp. 185-213); Corns for special purposes and uses (pp. 215-258); Disease resistance and tolerance (pp. 259-325); Insect

resistance and tolerance (pp. 327-360); and Desirable seed and pollen parents (pp. 361-371). [Continued in following abstr.] DIH

285

Corn. Improvement, seed production, and uses. [Book]

Jugenheimer, R. W.
xvii + 670pp. ISBN 0-471-45315-3 (1976) [many ref. En] Chichester, Sussex, UK; John Wiley & Sons Ltd. Price £21.85; \$37.80 [Dep. of Plant Genetics, Univ. of Illinois, Urbana-Champaign, Illinois, USA]

[Continued from preceding abstr.] IV. Development and evaluation of hybrids: Utilization of inbred lines (pp. 375-385); Predicting performance (pp. 387-398); Modern statistical methods (pp. 399-407); Types of experimental designs (pp. 409-415); and Performance trials (pp. 417-434). V. Seed production, processing, and distribution: Training seed technologists (pp. 437-440); Production of hybrid seed (pp. 441-455); Planning an efficient seedcorn processing plant (pp. 457-466); Harvesting, processing and storage of seed (pp. 467-483); Marketing seed (pp. 485-490); Foundation seed stock organizations (pp. 491-494); Seed certification (pp. 495-506); and Policies and legislation (pp. 507-516). A 17-pp. appendix of code numbers for predicting the performance of double cross hybrids, a 114-pp. bibliography and a 22-pp. index are also included. DIH

286

[The baking process and heat conditions in modern bakery ovens.] Protsess vypechki i teplovye rezhimy v sovremennykh khlebopekarnykh pechakh. [Book]

Lisovenko, A. T.
212pp. (1976) [115 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.76r

On the basis of experimental work, the most favourable conditions for bread baking have been established, and are presented in mathematical terms. The book includes the following chapters: Design and heating systems of modern ovens (pp. 5-30); Thermo-physical properties of dough and bread (pp. 30-56); Kinetics of the bread baking process (pp. 56-86); Heat and mass transfer during baking (pp. 86-115); Detn. of the most favourable baking conditions on the basis of experimental investigations (pp. 115-155); and Heat conditions in modern ovens (pp. 155-198). STI

287

Modern pastry chef. Vol. I. [Book]

Sultan, W. J.
viii + 360pp. ISBN 0-87055-225-2 (1977) [En] Westport, Connecticut, USA; AVI Publishing Co. Inc. [Food & Maritimes Trades High School, New York City, New York, USA]

This book provides the modern pastry chef with recipes and a comprehensive illustrated guide to the

preparation of bakery products and desserts. Each chapter covers a different bakery product or dessert. Chapters are: Speciality quick breads (pp. 1-23); Speciality breads and rolls (pp. 24-66); Sweet yeast-raised dough products (pp. 67-119); Doughnut varieties (pp. 120-143); Variety pies (pp. 144-195); Puff paste and choux paste products (pp. 196-239); and Variety cakes - gateaux (pp. 240-333). The following useful appendices are given: Approximate baking temp. for bakery products and desserts (pp. 334-336); weights and measures (pp. 337); Conversion tables for ingredients, can sizes and temp. (pp. 338-340); A glossary of cake and pastry terms and definitions, and bread baking terms and definitions (pp. 341-349); and Factors concerning the cooking of sugar (pp. 350-352). There is also a 7pp. subject index. [See following abstr. for Vol. 2.] SP

288

Modern pastry chef. Vol. 2. [Book]
Sultan, W. J.

ix + 348pp. ISBN 0-87055-226-0 (1977) [En]
Westport, Connecticut, USA: AVI Publishing Co.
Inc. [Food & Maritimes Trades High School, New
York City, New York, USA]

This second vol. continues with a variety of other items of concern to the pastry chef. It includes chapters on: Pancakes, crepes and fritters (pp. 1-19); custards, puddings, mousses and souffles (pp. 20-57); French pastries (pp. 58-85); Petit Fours and cookies (pp. 86-195); Variety tarts (flans), fruit cakes (cobblers) and strudel (pp. 196-225); Variety cheese cakes and specialities (pp. 226-247); Frozen desserts (pp. 248-285); and Cake decorating and finishing (pp. 286-320). Appendices (pp. 321-339) are the same as those on pp. 334-352 of Vol. 1. There is an 8pp. subject index. [See preceding abstr. for vol. 1.] SP

FATS, GLYCERIDES, LIPIDS, OILS

289

Lipid chromatographic analysis. Vol. 1 [Book]
Marinetti, G. V. (Editor)

Ed. 2, ix + 337pp. ISBN 0-8247-6355-6 (1976)
[many ref. En] New York, USA; Marcel Dekker,
Inc. [School of Med. & Dentistry, Dep. of Biochem.,
Univ. of Rochester, Rochester, New York, USA]

This revised and expanded edition incorporates methodological and theoretical advances in the chromatographic analysis of lipids of biological origin which have occurred since the publication of the 1967 edition. Chapters in this vol. are: Thin-layer chromatography of phospholipids and glycolipids, by O. Renkonen & A. Luukkonen (pp. 1-58, 107 ref.); Chromatography of phospholipids and glycolipids on Whatman SG-81 silica gel-

loaded paper, by R. E. Wuthier (pp. 59-109, 84 ref.); Chromatographic analysis of alkyl and alk-1-enyl ether lipids and their derivatives, by F. Snyder (pp. 111-148, 100 ref.); analysis of phosphatides and glycolipids by chromatography of their partial hydrolysis or alcoholysis products, by R. M. C. Dawson (pp. 149-172, 46 ref.); Column chromatography of neutral glycerides and fatty acids, by K. K. Carroll (pp. 173-214, 142 ref.); and Gas chromatography of neutral acylglycerols, by A. Kuksis (pp. 215-337, 176 ref.). [See also following 2 abstr.] AL

290

Lipid chromatographic analysis. Vol. 2. [Book]
Marinetti, G. V. (Editor)

Ed. 2, ix + pp. 339-712 ISBN 0-8247-6356-4
(1976) [many ref. En] New York, USA; Marcel
Dekker, Inc. [School of Med. & Dentistry, Dep. of
Biochem., Univ. of Rochester, Rochester, New
York, USA]

Chapters in this volume are: Thin layer chromatography of sterols and steroids, by B. P. Lisboa (pp. 339-478, 338 ref.); Gas chromatography of bile acids, by A. Kuksis (pp. 479-610, 219 ref.); Chromatography of prostaglandins, by E. G. Faniels (pp. 611-662, 139 ref.); Gas chromatographic analysis of carbohydrates in glycolipids, by G. Dawson (pp. 663-700, 54 ref.); and Gas chromatography of long chain nitrogen bases derived from lipids, by B. Weiss (pp. 701-712, 29 ref.). [See also preceding abstr.] AL

291

Lipid chromatographic analysis. Vol. 3. [Book]
Marinetti, G. V. (Editor)

Ed. 2, ix + pp. 713-999 ISBN 0-8247-6357-2
(1976) [many ref. En] New York, USA; Marcel
Dekker, Inc. Price FS115 [School of Med. &
Dentistry, Dep. of Biochem., Univ. of Rochester,
Rochester, New York, USA]

This vol. includes certain chapters of the first edition still of practical value. They include: Column chromatographic and associated procedures for separation and determination of phosphatides and glycolipids, by G. Rouser, G. Kritchevsky & A. Yamamoto (pp. 713-776, 24 ref.); Thin-layer chromatography of neutral glycerides, by V. Mahadevan (pp. 777-789, 53 ref.); Gas chromatography of cholesterol and sterol precursors, by R. Fumagalli (pp. 791-817, 107 ref.); Thin layer chromatography of bile alcohols and bile acids, by P. Eneroth (pp. 819-856, 91 ref.); Gas-liquid chromatography of fatty acids and derivatives, by R. A. Stein, V. Slawson & J. F. Mead (pp. 857-896, 278 ref.); and Gas chromatography of the long-chain aldehydes, by G. M. Gray (pp. 897-923, 52 ref.). A cumulative author and subject index covering all 3 vol. is included. [See also 2 preceding abstr.] AL

292

The role of fats in human nutrition. [Book]

Vergroesen, A. J. (Editor)

xiii + 494pp. ISBN 0-12-718050-8 (1975) [many ref. En] London, UK; Academic Press Inc. (London) Ltd. Price £14.00; \$36.25 [Unilever Res., Vlaardingen/Duiven, Vlaardingen, Netherlands]

This book reviews present knowledge of the physiological and pathological effects of dietary lipids on the development and treatment of some common diseases, e.g. atherosclerosis, diabetes mellitus, obesity, fat malabsorption and arterial thrombosis. Chapters include: The role of fats in human nutrition: an introduction, by A. J. Vergroesen & J. J. Gottenbos (pp. 1-41, many ref.) includes a summary of fatty acid composition of various fish, animal, and vegetable fats; Linoleic acid intake and vitamin E requirement, by F. C. Jager (pp. 381-432, many ref.); and Nutritional aspects of rapeseed oil, by R. O. Vles (pp. 433-477, many ref.). AL

293

Books and reviews on lipids.

Gunstone, F. D.

Progress in the Chemistry of Fats and other Lipids 15 (1) 75-92 (1977) [328 ref. En] [Chem. Dep., Univ., St. Andrews, UK]

Books and reviews on lipids published from 1960 to 1975 are listed in chronological order. Books appearing in several parts or volumes are generally listed under the year in which the first part on volume was published. A subject index to these references is presented. VJG

294

[German standard methods for examination of fats, fat products and related substances. 4th Supplement, 1975.] Deutsche Einheitsmethoden zur Untersuchung von Fetten, Fettprodukten u. verwandten Stoffen. 4. Ergänzung 1975. [Booklet] Germany, Federal Republic of, Deutsche Gesellschaft für Fettwissenschaft 70pp. (1975) [De] Stuttgart, Federal Republic of Germany; Wissenschaftliche Verlagsgesellschaft mbH Price DM24.00 (Looseleaf) & DM16.80 (DGF Members)

This supplement to this series of standardized methods for analysis of fats, their raw materials and related products covers the following aspects; sieve-analysis of oilseed extraction meals; detn. of water in fats and oils by the Karl Fischer method; the iodine-colour number method for detn. of the colour intensity of fats and oils; terminology of pure and commercial phosphatides; detn. of water in phosphatides by the Karl Fischer method; detn. of Fe in phosphatides by a colorimetric method using 1,10-phenanthroline chloride; isolation of unsaponifiable matter from fats, oils and their products; extraction and quantitative detn. of the total carotene fraction from the unsaponifiable matter of fats and oils; and quantitative separation

of α - and β -carotenes by column chromatography. [See also following abstr.] AJDW

295

[German standard methods for examination of fats, fat products and related substances. Installment 11, 1975.] Deutsche Einheitsmethoden zur Untersuchung von Fetten, Fettprodukten u. verwandten Stoffen. 11. Lieferung 1975. [Booklet] Germany, Federal Republic of, Deutsche Gesellschaft für Fettwissenschaft 52pp. (1975) [De] Stuttgart, Federal Republic of Germany; Wissenschaftliche Verlagsgesellschaft mbH Price DM18.00 (Looseleaf) & DM12.60 (DGF Members)

This 11th part of this series of standardized methods for testing and analysis of fats, their raw materials and related products gives details of methods for evaluation of waxes. Aspects covered include: terminology of waxes; detn. of the dropping point; detn. of the setting point; evaluation of flow properties; detn. of consistency by a penetrometer method; detn. of mol. wt.; detn. of the breaking point by the method of Fraass; detn. of the softening point by the ring and ball method; and separation of iso- and n-hydrocarbons. [See also preceding abstr.] AJDW

296

The oil palm. [Book]

Hartley, C. W. S.

Ed. 2, xviii + 806pp. ISBN 0-582-46809-4 (1977) [many ref. En] Harlow, Essex, UK; Longman Group Ltd. Price £25.00

This is a completely revised edition of the first comprehensive textbook with world-wide coverage on the oil palm (*Elaeis guineensis* Jacq.). It covers all aspects of the plant's growth and exploitation. Chapters include: The origin and development of the oil palm industry (pp. 1-36, 58 ref.), including importation and usage of oil palm products; Mixed cropping, rearing livestock among oil palms and tapping for wine (pp. 589-604, 23 ref.), including production of palm wine; and The products of the oil palm and their extraction (pp. 692-780, 107 ref.), covering characteristics of oil palm products, quality of palm oil and kernels, traditional methods of extraction, hand press mills, power-operated mills, and milling control. Author and references indexes and an 18-pp. subject index are included. This book forms part of the wide-reaching Tropical Agriculture Series. AL

297

Cottonseed chemistry and technology. [Book]

Murti, K. S.; Achaya, K. T.

xvi + 348pp. (1975) [many ref. En] New Delhi, India; Publications & Information Directorate, CSIR. Price Rs77.00; \$32.00; £13.00

This volume, written principally by K. S. Murti before his death, embodies an exhaustive treatment of the nature and utilization of cottonseed and its

derived products, with special reference to conditions in India. Chapters are: The cottonseed industry in retrospect (pp. 1-12, 8 ref.); Trends in production and consumption of cotton and cottonseed (pp. 13-34, 6 ref.); Composition and characteristics of cottonseed (pp. 35-47, 39 ref.); Gossypol, by S. D. Thirumala Rao (pp. 48-71, 143 ref.); Biological processes and storage of cottonseed (pp. 72-90, 61 ref.); Standards for cottonseed and its products, by K. T. Achaya (pp. 91-103, 12 ref.); Pretreatment of cottonseed (pp. 104-125, 12 ref.); Recovery of oil from cottonseed (pp. 126-163, 95 ref.); Processing of cottonseed oil (pp. 164-222, 177 ref.); Hydrogenation (pp. 223-265, 172 ref.); Deodorization of cottonseed oil (pp. 266-286, 38 ref.); Cottonseed oil (pp. 287-306, 88 ref.); Cottonseed cake, meal and flour (pp. 307-330, 82 ref.); and Linters and hulls, by K. T. Achaya (pp. 331-340, 21 ref.). 'AL

298

[Synthesis and utilization of monoglycerides.]

Syntez i primenenie monoglitseridov. [Book]

Goryaev, M. I.

134pp. (1976) [536 ref. Ru] Alma-Ata, USSR; Izdatel'stvo "Nauka" Kazakhskoi SSR. Price 0.92r

This book is designed for commercial workers engaged in the application of monoglycerides to technological processes and for scientists in the field of synthesis of new glycerides derivatives. It will be of interest to students of chemical, biological and food institutes and to those engaged in the chemical, food and pharmaceutical industries and in agriculture. The following chapters are included: Synthesis of monoglycerides (pp. 8-27); Synthesis of monoglycerides derivatives (pp. 27-38); Physico-chemical properties of monoglycerides (pp. 38-45); Monoglycerides analysis methods (pp. 46-64); and Applications of monoglycerides (pp. 64-113). STI

MILK AND DAIRY PRODUCTS

299

Proceedings. XIX International Dairy Congress.

Vol. II. [Conference proceedings]

International Dairy Congress

1957fa 650pp. (1976) [many ref. En, Fr, De]

New Delhi, India; XIX International Dairy Congress Secretariat

Part II of the proceedings of this Congress gives the texts of 5 lectures on the main Congress themes: Organizing for milk production in developing areas, by A. H. Somjee (pp. 185-193); Impacts of dairy development: economic and technical, by E. H. McCauley (pp. 194-201); Impacts of dairy development - nutritional and

social, by D. E. Clarke (pp. 202-210, 19 ref.); The tasks of dairy development, by A. R. Melville (pp. 211-219); and Structures for dairy development - a synthesis, by M. Halse (pp. 220-229). The texts are also given of lectures presented in the Dairy Sciences and Dairy Industry sections: Dairy farm management techniques for the production of milk of hygienic quality, increased returns and building up of farm resources, by A. G. Itzerott (pp. 230-239, 56 ref.); Genetic and environmental factors, breed and body size in the production of milk/meat, by L. Iton (pp. 240-256, 20 ref.); Recent advances in the processing of semen and AI techniques in the breeding of cows and buffaloes, by J. Stichbury (pp. 257-265); The buffalo as a producer of milk, by D. Sundaresan (pp. 266-279, 89 ref.); Recent researches on feeding for milk production, by J. B. Hutton (pp. 290-294, 124 ref.); Health protection in dairy herds with reference to recent advances in diagnosis, prevention of infectious diseases etc., by C. Werdelin (pp. 295-305, 20 ref.); Recent advances in the chemistry and physics of milk and milk products for standardization of processing and manufacturing techniques, by K. M. Shahani (pp. 306-322, 25 ref.); [continued in following abstr.]. AJDW

300

Proceedings. XIX International Dairy Congress.

Vol. II. [Conference proceedings]

International Dairy Congress

1957fa 650pp. (1976) [many ref. En, Fr, De]

New Delhi, India; XIX International Dairy Congress Secretariat

[Continued from preceding abstr.] Enzyme systems influencing processing and storage of milk and milk products, by W. K. Downey (pp. 323-357, 176 ref.); Physico-chemical make-up of buffalo milk in the standardization of techniques of handling, processing and manufacture of products, by N. C. Ganguli (pp. 358-377, 175 ref.); Recent advances in the microbiology of handling, processing, manufacture and storage of milk and milk products, by P. Solberg (pp. 378-389, 91 ref.); Recent advances in laboratory techniques (chemical) for quality control of milk and milk products, by R. L. Demeter (pp. 390-400, 42 ref., Fr); Recent advances in laboratory techniques (bacteriological) for quality control of milk and milk products, by A. Tolle (pp. 401-418, 12 ref., De); Recent advances in the nutritional and physiological aspects of milk and milk products, by H. W. Kay (pp. 419-431, 61 ref.); Statutory specifications of standards and terminology for milk products, by J. Ekman (pp. 432-441); Technological, economic and distribution aspects of liquid milk retailing by different systems, by T. R. Ashton (pp. 442-453, 51 ref.); Recent developments in the conservation of milk solids as (i) evaporated and dried products, (ii) frozen cream and butter and (iii) anhydrous milk fat, by W. B. Sanderson (pp. 454-465, 68 ref.); Reconstitution and recombination of conserved products for extending milk supply for liquid consumption, by F. G. Kieseker (pp. 466-478, 95 ref.); [continued in following abstr.]. AJDW

301

Proceedings. XIX International Dairy Congress. Vol. II. [Conference proceedings] International Dairy Congress 1957fa 650pp. (1976) [many ref. En, Fr, De] New Delhi, India; XIX International Dairy Congress Secretariat

[Continued from preceding abstr.] Recent developments in the manufacture of (i) infant and weaning foods, (ii) edible casein etc., (iii) ice-cream, by J. H. Verhoog (pp. 479-488, 38 ref.); Recent developments in the manufacture of (i) cream, butter, ghee etc. and (ii) cheese and fermented milk products (yoghurt, dahi etc.), by A. H. Pedersen (pp. 489-498); Recent advances in the formulation and processing of new dairy foods, by D. H. Bullock (pp. 499-510, 48 ref.); Recent advances in packaging, storage and transport of milk and milk products, by H. S. Hall (pp. 511-521, 39 ref.); Utilisation of byproducts within the plant and economic disposal of dairy effluent, by L. L. Muller (pp. 522-533, 107 ref.); Optimizing capital investment for the dairy enterprise through the 'total systems' approach, manpower productivity, scalar economies, by T. O'Dwyer & M. Keane (pp. 534-546, 39 ref.); Recent trends in developing national and international marketing of dairy products, by C. Patrick (pp. 547-557, 3 ref.); Dairy education, in-service training and extension and information services, by A. J. Overby (pp. 558-567); and Institutional framework for the dairy industry, by A. Chanier (pp. 568-580, Fr). [Papers in Vol. I of the proceedings of this conference are abstracted in FSTA (1975) Vol. 7.] AJDW

302

Cheese. Vol. III. Manufacturing methods. [Book] Davis, J. G. pp. 465-1032 ISBN 0-443-01067-6 (1976) [En] Edinburgh, UK; Churchill Livingstone Price £17

This 3rd vol. in the series on cheese gives a general description of the main cheese varieties throughout the world, and describes the methods for manufacture in sufficient detail to allow any trained cheesemaker or dairy technologist to make them. In addition to the country-by-country descriptions of cheese varieties, there are also chapters on the general principles of cheesemaking, modern conventional cheesemaking equipment, mechanization, continuous cheesemaking, packaging, and new installations. There is a 9-page subject index. [Previous volumes were: Cheese. Vol. I. Basic technology and Vol. II. Annotated bibliography with subject index. 1965. J. & A. Churchill Ltd., London.] ADL

303

Cheese. Vol. IV. Annotated bibliography with subject index. [Book]

Davis, J. G. v + 306pp. (1975) [many ref. En] Edinburgh 4, UK; Churchill Livingstone Price £8.50
See preceding abstr.

304

Ice cream service handbook. [Book]

Arbuckle, W. S. 130pp. ISBN 0-87055-211-2 (1976) [En] Westport, Connecticut, USA; AVI Publishing Co. Inc. [Univ. of Maryland, College Park, Maryland, USA]

This handbook gives information on ice cream and related products in a non-technical manner. It describes various frozen desserts and outlines their characteristics, composition, method of manufacture and product properties. Chapter headings are: Ice cream in the food service industry; Fundamentals of frozen dairy foods manufacture; Scope and trends in the frozen dairy foods industry; Handling ice cream at the sales outlet; Dispensing the product; The retail ice cream store; Personnel and customer relations; Sanitation and good housekeeping; Menus and recipes; Advertising and promotions; and Records and controls. AL

305

[Analyses of milk and milk products.] Badanie mleka i jego przetworow. [Book] Budslawski, J.

330pp. (1973) [189 ref. Pl] Warsaw, Poland; Panstwowe Wydawnictwo Rolnicze i Lesne Price zł50.00

This book contains 6 major chapters, covering analysis of: Milk and milk beverages (pp. 20-209); Cream, cultured cream and ice cream (pp. 210-214); Concentrated and dried milk products (pp. 215-231); Butter and butterfat (pp. 232-261); Tworog and cheese (262-272); and Ancillary materials (water, additives, packaging materials, detergents, etc.) (pp. 273-308). Subject index is on pp. 320-330. FL

306

The world atlas of cheese. [Book]

Eekhof-Stork, N. 240pp. ISBN 0-8467-0133-2 (1976) [26 ref. En] UK; Paddington Press Ltd. Price £12.95 [Nutr. Information Dep., Dutch Dairy Bureau, Rijswijk, Netherlands]

This beautifully illustrated book takes the reader on a guided tour of every cheese-producing area of the world, describing virtually all cheeses (from the most familiar to the most obscure) in their national context in a country-by-country survey. It explains how the climate and geography of an area affects the local dairy industry, how the various national cheeses originated, how they are made, packaged and sold, how they taste, look and smell, and how they can best be enjoyed. In addition to the many drawings and photographs, there are a series of cheese maps and production diagrams detailing the manufacture of several major cheese types (Emmental, Cheddar, Gouda, Camembert and Cottage). Special sections include: The history of cheese and cheesemaking; Milking cattle; Milking and treatment of milk; The principles of cheesemaking; Quality control; Cheese in your

home; Cheese and wine; Recipes with cheese; and Make your own cheese. There is a short glossary and an index of cheese names at the end of the book, which is also published in a Dutch edition (Spectrum kaasatlas) by Spectrum, Amsterdam. ADL

307

[Manual of methods for analysis of milk and milk products.] Manual de metodos de analisis de leche y lacticiños. [Book]
Ramos Cordova, M.
xiii + 182pp. (1976) [94 ref. Es] Mexico City, Mexico; Author [Berna 12, Desp. 201, Mexico 6, DF Mexico]

This manual describes methods for sampling milk and milk products and for sample preparation, physical analysis (sediment, density or sp. gr., refractive index, fp), chemical analysis (acidity, pH, alcohol test, chlorides, lactose, fat, TS, SNF, phosphatase), identification of common adulterants (water, glucose, sucrose, etc.), detection of bacterial inhibitors, and bacteriological analysis (standard colony count, psychrotroph count, thermotolerant bacteria count, thermophilic bacteria count, direct Breed count of bacteria and somatic cells, and coliform count). Details are given of equipment, reagent, technique, interpretation of results, possible sources of error, and form in which results should be reported. In certain cases the values considered normal or acceptable in Mexico are indicated. The author has endeavoured to include all basic information needed for laboratory testing of milk and the major milk products (cream, ice cream, cultured cream, yoghurt, butter and cheese). There is a 10-page subject index. ADL

308

[Automation of technological processes in the production of canned milk products.]
Avtomatizatsiya tekhnologicheskikh protsessov proizvodstva molochnykh konservov. [Book]
Brusilovskii, L. P.; Vainberg, Y. Ya.
279pp. (1975) [Ru] Moscow, USSR; Pishchevaya promyshlennost'. Price 1.04r

The book includes the following chapters: Automation of the processes preceding the manufacture of canned milk products (pp. 7-48); Automation of the manufacture of dried milk products (pp. 49-90); Automation of the production processes of condensed and evaporated milk (pp. 91-115); Automated in-place cleaning of equipment and pipelines (pp. 116-130); Means of automatic control of temp. and pressure (pp. 131-151); Means of automatic control of milk flow and flow of other materials (pp. 151-176); Means of automatic control of milk and milk products vol. and wt. and output of cans (pp. 177-201); Means of automatic control of milk and dairy products composition and the composition of other materials (pp. 202-218); Means of automatic control of milk and milk products quality as well as the quality of other materials (pp. 219-248); and State system of the commercial apparatus and means of automation (pp. 249-265). STI

309

[Laban Zabady and prolongation of human life.] [Book]

Abou-Donia, S. A. (Editor)
64pp. (1975) [Ar] Alexandria, Egypt; Galal Hezzi & Co. [Fac. of Agric., Alexandria Univ., Alexandria, Egypt]

Chapters included in this study of Laban Zabady, an Egyptian cultured milk, are: History of fermented milks (pp. 8-10); Composition and nature of materials of fermented milks (pp. 11-21); Fermented milks and prolongation of human life (pp. 22-32); Manufacture of fermented milks (pp. 33-54); and Editor's researches on fermented milks (pp. 55-64). AS

310

Making cheeses. [Book]
Ogilvy, S.

88pp. ISBN 0-7134-3168-7 (1976) [13 ref. En] London, UK; B. T. Batsford Ltd. Price £3.75

This line-illustrated book, written specifically for non-dairy specialists, describes how to make cheese at home without any complicated equipment or special premises, and gives details of techniques for making hard, semi-hard and soft cheeses. Step-by-step instructions are given for making many cheese types: fresh milk cheese, acid-curd cheeses, traditional soft cheeses (Crowdie, Coulommiers, Colwick, Cambridge), cream cheeses, and 3-semi-hard cheeses (the larger Smallholder cheese, Caerphilly-type cheese and Small Cheshire), as well as other dairy products (yoghurt, cream and butter). Some recipes for cooking with home-made cheeses, (preferably acid-curd cheese or cream cheese) are included. AL

311

[Separation in the dairy industry.] Separieren in der Milchindustrie. [Book]

Lipatow [Lipatov], N. N.
303pp. (1976) [289 ref. De] Leipzig, German Democratic Republic; VEB Fachbuchverlag Price DM32.00 [All-Union Dairy Ind. Res. Inst., USSR]

This monograph, translated from a Russian original [see FSTA (1972) 4 SP629] contains 7 chapters, covering: the construction of modern milk separators; physico-chemical factors in separation; the main hydraulic laws governing separation (flow of liquid in the bowl and in the space between disks, etc.); distribution of liquid and of precipitated fractions in the bowl; calculation of parameters involved in the milk separation process; general technology of milk separation; and technology of the separation of cream, buttermilk, whey, curd (for continuous quarg manufacture) and condensed milk. In addition to cream separators and clarifiers, the book also deals with separators for special purposes such as standardization, homogenization and bacto-fugation. Technical details are given in numerous diagrams, tables and graphs. ADL

312

[Chemistry and physics of milk.] Chemie und Physik der Milch. [Book]
Töpel, A.
472pp. (1976) [143 ref. De] Leipzig, German Democratic Republic; VEB Fachbuchverlag Price M30.00

This book is intended primarily as a textbook for students of dairying and as such contains definitions and general scientific groundwork at the beginning of each section. It may also serve to update the knowledge of those experienced in dairying. Chapters are: Milk and its composition (including reasons for variations in the content of individual components); Constituents of milk (including details on lactose, lipids, proteins, enzymes, salts, vitamins, and others); Milk as a polydisperse system (as an emulsion, colloidal solution, pure solution); Physical/chemical properties (density, acidity, redox potential, refractive index, viscosity, surface tension, freezing point, electrical conductivity); Effect on milk and milk components of manufacture and processing (effect of energy, temp., light, and biochemical effect); and Flavour and odour of milk and milk products (including normal and abnormal flavour and odour, prevention of abnormal flavour and smell, artificial aromas). The book contains a 4-pp. list of references and a 9-pp. subject index. DMK

313

Home-made butter, cheese and yoghurt. [Book]
Black, M.
72pp. ISBN 0-7158-0453-7 (1977) [7 ref. En]
Wakefield, West Yorkshire, UK; EP Publishing Ltd. Price £1.25

This attractive book is for people who want to make butter, cheeses or yoghurt on a small scale (probably using ≤ 3 gal milk at a time) for use at home. Following general descriptions of the basic requirements in the room to be used as the dairy and of the cheeses it is possible to make, details are given of equipment necessary for making butter, cheeses and yoghurt. Clear instructions are given for the methods of preparation of these dairy products. Appealing recipes are presented for dishes in which soft cheeses, whey, buttermilk or yoghurt are incorporated, and a list of yoghurt flavourings and seasonings is given. DMK

314

[Milk chemistry.] [Book]
Yöney, Z.
263pp. (1974) [36 ref. Tr] [Ankara, Turkey; Universitesi Ziraat Fakültesi]

315

[Condensed and dried milk technology.] [Book]
Kaptan, N.
60pp. (1974) [25 ref. Tr] [Ankara, Turkey; Universitesi Ziraat Fakültesi]

316

[Cheese technology.] [Book]
Eralp, M.
331pp. (1974) [16 ref. Tr] [Ankara, Turkey; Universitesi Ziraat Fakültesi]

317

[Yield and composition of milk from mares of different breeds kept in stables and on pasture.] (In "Genetika i selektsiya rastenii i zhivotnykh v Kazakhstane".) [Book]
Fedotov, P. A.; Akimbekov, B. R. Union of Soviet Socialist Republics, Kazakhskoe Obshchestvo Genetikov i Seleksionerov im. N. I. Vavilova pp. 267-269 (1974) [Ru] Alma-Ata, USSR: Izdatel'stvo 'Kainar' [Alma-Atinskii Zoovet. Inst., USSR]

10 Jabe Kazakh (JK), 10 Saddle Kazakh (SK), 5 Draft Kazakh (DK), 5 Kushum (K) and 5 Tori (T) mares received identical winter rations of 8-10 kg lucerne hay, 4-6 kg fodder beet and 2.5-3.0 kg ground barley/day. In spring and summer they were kept on cultivated pasture, with rations of mainly green lucerne and maize. The mares were milked only in the daytime, being left with their foals at night. Estimated total milk yield (including milk received by foals) and yields obtained by milking, respectively, over 7 months of lactation, were: JK, 3017.7 and 1254.4 l.; SK, 2158.8 and 998.7 l.; DK, 3116.4 and 1308.4 l.; K, 2599.8 and 1068.9 l.; and T, 2948.4 and 1230.6 l. Highest milk yield/100 kg live wt. was obtained from JK (719 l.) and lowest from SK (470 l.). Peak yield was in the 2nd-3rd months of lactation. The highest coeff. of persistency of lactation were found in JK (83%), T (81%) and DK (79%). JK also had the highest milk fat % (1.86), protein % (2.23), lactose % (6.80), and SNF % (9.10). Milk of SK had the greatest density. Variations in milk composition during lactation are discussed. It is recommended that koumiss farms near population centres should be based mainly on JK and DK, in view of their high milk yield. ADL

318

[The dairy industry in figures.] Milchwirtschaft in Kennzahlen. [Book]
Bruncke, R.; Basche, R.; Cersovsky, H.; Jost, G.; Kittner, E.; Piehler, A.; Wunderlich, J.
294pp. Order No. 5461134 (1977) [31 ref. De] Leipzig, German Democratic Republic; VEB Fachbuchverlag Price M19.80

This detailed compilation of numerical data of value in the dairy industry includes the following chapters: Milk production data for various countries (pp. 9-12); Composition and selected characteristics of milk and its constituents (pp. 13-41); Dairy farming, and milk production and quality (pp. 42-64); Characteristics of selected dairy products, by-products, by-products and effluents (pp. 65-107); Technical data concerning processing of milk and milk products (pp. 108-

175); Technical and physical data (pp. 176-219); Grading and quality (pp. 220-244); Economic data (245-271); Information concerning patents in the dairy industry (pp. 272-280); and Information concerning building materials, etc. (pp. 281-287). A 2-pp. bibliography and a 5-pp. subject index are included. AJDW

319

[Homogenizers for the dairy industry.] Gomogenizatory dlya molochnoi promyshlennosti. [Book]

Mukhin, A. A.; Kuz'min, Yu. N.; Gisin, I. B. 62pp. (1976) [11 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.22r

Milk homogenizers developed in the USSR, tested at dairy plants and manufactured by the Food Machinery Works in Odessa are described. The following chapters are included: Products processed by homogenization, and mechanism of homogenization (pp. 4-7); Main characteristics and design of homogenizers (pp. 7-51); Lubrication and cooling (pp. 51-52); Operation of homogenizers under milk heat-processing conditions (pp. 52-53); Capacity of homogenizers (pp. 59-60); and Assembly and operation (pp. 60-64). STI

320

Cheese and fermented milk foods. [Book] Kosikowski, F. V.

Ed. 2, ix + 711pp. (1977) [many ref. En] Ann Arbor, Michigan, USA; Edwards Brothers, Inc. Price \$18.00 [Dep. of Food Sci., Cornell Univ., Ithaca, New York, USA]

This expanded edition of a book published 10 yr ago covers all aspects of cheese, cheesemaking and fermented milk products, including: history of cheesemaking; principles of milk fermentation; cultures and starters; characteristics of major fermented milk products (kefir, koumiss, Bulgarian buttermilk, acidophilus milk, yoghurt, cultured buttermilk, cultured cream, ripened butter); yoghurt production; fundamentals of cheesemaking and curing; Cottage cheese; Bakers', Neufchatel and cream cheese (including soft cheeses such as the German quarg, Danish ymer and Swedish Lactofil); Latin-American white cheeses made from cows' milk; soft and hard Italian cheeses; Cheddar and related types; cheese with eyes (e.g. Emmental, Gruyere, Edam and Gouda); control of spoilage bacteria in cheese milk; bacterial surface ripened cheese (e.g. Saint Paulin); mould-ripened cheese (Stilton, Roquefort, Gorgonzola, etc.); sheep, goat and buffalo milk cheese (Bulgarian Pickled White, Feta, Manchego, etc.); whey cheese (including both the Norwegian condensed-whey cheeses and the Ricotta type cheeses); drying and freezing of cheese; processed cheeses; nomadic cheesemaking; whitening of cheese (e.g. with TiO_2); biology of cheese ripening; whey processing and whey foods; imitation cheese foods, etc.; mechanized and continuous cheesemaking; cheesemaking by

ultrafiltration; farm- and home-making of cheese and yoghurt; rodent, pest and mould control; analysis; standards; nutritional aspects; public health aspects; packaging; cheese yield; and economics of cheesemaking (including production and consumption statistics). Detailed compositional data are given in an appendix, and there is an 11-pp. subject index. ADL

321

Standardized pilot milk plants. [Booklet]

Hall, H. S. Food & Agriculture Organization; Industry Cooperative Programme viii + 104pp. ISBN 92-5-100089-1 (1976) [En] Rome, Italy

This publication is intended to provide a basis on which the processing of milk and milk products can be planned, at min. costs, in a country or region where there is no established dairy industry. It is addressed to those responsible for initiating and implementing such projects. Chapter headings are: The objectives of milk plant standardization (pp. 1-4); Process units (milk reception - raw milk storage; reconstitution and recombination of milk; standardization of butterfat content; homogenization; pasteurization; packaging and storage of pasteurized milk; in-bottle sterilization - storage; UHT treatment and aseptic packaging; yoghurt and fermented milk manufacture; cream separation and treatment; buttermaking, packaging and storage; ghee manufacture; evaporation, drying and powder storage; in-place cleaning; laboratory control; services) (pp. 5-73); Building requirements (pp. 75-84); Project planning (pp. 85-90); and Plant operation and layout (pp. 91-104). A nominal intake of 25 000 l. milk/day has been assumed as a reasonable min., but the equipment has been chosen so that the daily throughput of the plant can vary between about 50 and 150% of the nominal figure. FL

322

Company profiles. Supplement to Standardized pilot milk plants. [Booklet]

Food & Agriculture Organization; Industry Cooperative Programme 22pp. (1976) [En] Rome, Italy

This booklet gives a brief summary of the scope of activities of 7 companies which are members of the Industry Cooperative Programme (ICP) and have collaborated with the author in the preparation of the book Standardized pilot milk plants [see preceding abstr.] by providing technical information and financial support. The booklet (in En, Fr and Es) is available free of charge from ICP Secretariat, FAO, Rome. FL

323

[Membrane processes for separating milk and milk products.] Membrannyye metody razdeleniya moloka i molochnykh produkto. [Book]

Lipatov, N. N.; Mar'in, V. A.; Fetisov, E. A. 168pp. (1976) [109 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost', 1.15r

This book is divided into 2 parts, each containing 6 chapters. The first part deals with electrodialysis, covering its principles, membranes and plant, technological aspects, economics, and applications in the dairy industry. The second part is devoted to ultrafiltration and reverse osmosis, describing again the principles, equipment and uses in the dairy industry. The book is for workers in the dairy industry and research and development organizations and students. FL

324

[Continuous lactic acid fermentation in the manufacture of cultured milk products.]
Nepreryvnoe molochnokisloe brozhenie v proizvodstve kislomolochnykh produktov. [Book]
Patkul', G. M.; Lyshcheva, L. A.; Kudryavtseva, T. A.

52pp. (1976) [53 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.18r

Much attention is paid to application of the continuous lactic acid fermentation process during the production of tvorog. It is emphasized that continuous lactic acid fermentation process may be economical only at large, fully mechanized and automated dairy plants. The following chapters are included: Principles of continuous microorganisms cultivation (pp. 5-11); Continuous cultivation of lactic acid bacteria (pp. 11-15); Machinery used for continuous lactic acid fermentation (pp. 15-19); Factors affecting continuous lactic acid fermentation (pp. 19-42); and Application of continuous lactic acid fermentation in the manufacture of tvorog (pp. 42-50). STI

FISH

325

The economics, marketing, and technology of fish protein concentrate. [Book]
Tannenbaum, S. R.; Stillings, B. R.; Scrimshaw, N. S. (Editors)
x + 500pp. ISBN 0-262-20022-8 (1974) [many ref. En] Cambridge, Massachusetts, USA; MIT Press Price £13.60

This book is based on papers presented at the International Conference on Fish Protein Concentrate held at Massachusetts Institute of Technology, June 6-8, 1972, but is not the proceedings of the conference. Many papers presented are included at greater length, while other contributions do not appear at all. The book is divided into 5 parts: Resources (pp. 8-54); Processing (pp. 57-161); Nutrition (pp. 165-251); Utilization (pp. 255-352); and Economics (pp. 355-481). Chapters included are: Fish protein concentrate (FPC) the present and future status of available oceanic resources, by J. Arnold & L.

S. Sprague (pp. 8-32, 20 ref.); The response of fisheries management philosophy to the imperatives of modern technology, by R. D. Balkovic, R. F. Hutton & D. R. Moore (pp. 33-36, 1 ref.); Raw material supply for FPC, by W. F. Royce (pp. 37-43, 2 ref.); Fish resources for production of FPC, (Anon.) (pp. 44-54, 2 ref.); FPC processes, by R. Finch (pp. 57-101, 86 ref.); Canadian FPC research and development, by L. W. Regier (pp. 102-110, 13 ref.); Aqueous-solvent processes, by J. Spinelli (pp. 111-121, 12 ref.); FPC approaches and projects in Norway, by E. Heen (pp. 122-124); Liquefied FPC, by T. Kinumaki (pp. 125-134, 8 ref.); The fish protein hydrolysate (FPH) process: a target design approach, by M. Rutman & W. Heimlich (pp. 135-161, 20 ref.); [continued in following abstr.] VJG

326

The economics, marketing, and technology of fish protein concentrate. [Book]
Tannenbaum, S. R.; Stillings, B. R.; Scrimshaw, N. S. (Editors)
x + 500pp. ISBN 0-262-20022-8 (1974) [many ref. En] Cambridge, Massachusetts, USA; MIT Press Price £13.60

[Continued from preceding abstr.] Nutritional and safety characteristics of FPC, by B. R. Stillings (pp. 165-211, 64 ref.); Evaluation of FPC for infant and child feeding, by N. S. Scrimshaw (pp. 212-233, 31 ref.); Evaluation of the protein quality of FPC for maintenance of adults, by V. R. Young & N. S. Scrimshaw (pp. 234-251, 12 ref.); Utilization of FPC and acceptability, by V. D. Sidwell (pp. 255-282, 27 ref.); Enzymatic solubilization of FPC, by M. C. Archer, S. R.; Tannenbaum & D. I. C. Wang (pp. 283-301, 11 ref.); Acceptability of FPC products, by G. M. Dreosti (pp. 302-307); The enrichment of foods with FPC, by E. Yanez, D. Ballester & F. Monckeberg (pp. 308-317, 9 ref.); Effects of processing parameters on the chemical and functional characteristics of FPC, by D. L. Dubrow (pp. 318-327, 7 ref.); Utilization of FPC or marine protein concentrate, by A. Bhumiratana (pp. 328-329); Studies on the chemical modification of FPC, by A. F. Anglemier & H. J. Petropakis (pp. 330-336, 4 ref.); FPC in the treatment of malnourished children and in field, technology of utilization, preparation and acceptability, by J. M. Baertl (pp. 337-352, 8 ref.); [Continued in following abstr.] VJG

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The economics, marketing, and technology of fish protein concentrate. [Book]
Tannenbaum, S. R.; Stillings, B. R.; Scrimshaw, N. S. (Editors)
x + 500pp. ISBN 0-262-20022-8 (1974) [many ref. En] Cambridge, Massachusetts, USA; MIT Press Price £13.60

[Continued from preceding abstr.] The economics of FPC, by J. A. Crutchfield & R. Deacon (pp. 355-438, 60 ref.); Marketing and economics: Peru, fish meal and FPC, by G.

Pontecorvo (pp. 439-445, 1 ref.); Factors affecting the economics of an FPC manufacturing operation, by E. R. Pariser (pp. 446-467); Some problems in marketing FPC, by R. Kreuzer (pp. 468-474); Some aspects of the fish protein market in industrialized countries: a view from private industry, by J. R. Champagne (pp. 475-479); and Notes from Nabisco-Astra, by H. J. Watson (pp. 480-481). VJG

328

Encyclopedia of fish. [Book]

Burton, M.; Burton, R.

253pp. ISBN 0-7064-0393-2 (1975) [En]

London, UK; Octopus Books Ltd.

This illustrated encyclopedia covers numerous species and groups of fish (including many edible types), and includes details of the commercial importance, food uses, toxicity, etc. of numerous edible species. AJDW

329

Stable tropical fish products.

Campbell, M.

International Development Research Centre Monographs IDRC-041e 28pp. ISBN 0-88936-050-2 (1975) [5 ref. En] Ottawa, Canada; International Development Research Centre

This report on a workshop held in Bangkok, Thailand (8-12 Oct. 1974) includes brief reports of sessions on: Traditional products; Non-traditional and industrial products; Consumption patterns;

Available resources; By-catch utilization; Product-handling problems; Practical steps for product development; Action programmes and priorities; and Implementation of results. Research capabilities for product development at technological institutes in Asia and the Far East are discussed. Papers presented at this meeting are included in microfiche form, including the following: Stable tropical fish products for human consumption, by M. Y. Ali (pp. 1-5); Stable tropical fish products for human consumption, by M. Jayaraj (pp. 6-12); Utilization of trash fish-incidental catch of shrimp trawlers, by R. K. Rastogi (pp. 13-28, 17 ref.); Stable tropical fish products for human consumption, by N. Zachman (pp. 29-43); Stable tropical fish products for human consumption, by S. Ilyas (pp. 44-56); The status of fish processing and distribution in Korea, by S. Park (pp. 57-68); Preliminary report on the processed fish products industry in Malaysia, by S. Ahmad (pp. 69-92); Stable tropical fish products for human consumption under Philippines situation, by F. R. Gonzales (pp. 93-101); Relevant problems on stable tropical fish products in the Philippines, by E. C. Sison (pp. 102-104); Stable tropical fish products for human consumption, by E. G. Goonewardene (pp. 105-112); and Stable tropical fish products for human consumption, by B.-O. Saisithi (pp. 113-122). AJDW

330

Eel capture, culture, processing and marketing.

[Book]

Forrest, D. M.

205pp. ISBN 0-85238-070-4 (1976) [many ref.

En] Farnham, Surrey, UK; Fishing News (Books) Ltd. Price £7.25

This book includes a chapter on eel processing (pp. 153-171) covering killing, cleaning, gutting, freezing, glazing, cold storage, brining, smoking, jellying, canning, and manufacture of kabayaki (eel slices dipped in soya sauce and a chapter on eel marketing in various countries (pp. 173-191). AJDW

331

British food fish. [Book]

Watkin, G.

64pp. ISBN 0-950468-0-1 (1976) [En]

Worshipful Company of Fishmongers. Price £4.00 [Fishmongers' Hall, London, UK]

This detailed illustrated manual of fish inspection (intended for use in conjunction with practical training) comprises 2 sections: Identification (pp. 9-49), covering identification of round, flat, irregular and exotic fish (on the basis of shape, fin pattern, basic colour, lateral line and other distinctive characteristics), identification of crustacea and molluscs, and smoke curing of fish; and Inspection for freshness (pp. 51-62), covering subjective methods of evaluation of gutted and gut-in wet fish, cured fish, molluscs and crustacea, objective methods of examination, and shellfish control. A 2-pp. subject index is included. AJDW

332

[Smoking of fish.] Obrabotka ryby kopcheniem.

[Book]

Khvan, E. A.

112pp. (1976) [22 ref. Ru] Moscow, USSR: Pishchevaya Promyshlennost'. Price 0.31r

Problems related to fish product quality improvement and extension of smoked fish products available are dealt with. The book includes the following chapters: Smoking as a method for improving the commercial properties of fish (pp. 5-42); Smoked fish quality and factors affecting it (pp. 42-63); Smoking equipment (pp. 63-91); and New kinds of fish smoking process (pp. 91-112). STI

333

International Conference on Marine Resources development in Eastern Africa, University of Dar es Salaam, Dar es Salaam, Tanzania, April 4-9, 1974. [Conference proceedings] Msangi, A. S.; Griffin, J. J. Tanzania, University of Dar es Salaam; United States of America, University of Rhode Island, International Center for Marine Resource Development (Editors) 130pp. (1974) [En] Dar es Salaam, Tanzania

The full text is given of papers present at this symposium, including the following which contain information concerning the use of fish as food: Processing and marketing marine fish - possible guidelines for the 1975-1979 period, by U. N. Wijkstrom (pp. 55-67, 3 ref.); Marine food science and technology, by S. M. Constantinides (pp. 107-110); and Response to the preceding paper, by T. W. Maembe (pp. 110-113). AJDW

334

[Technical microbiology of fish products.] Tekhnicheskaya mikrobiologiya rybnikh produktov. [Book]

Dutova, E. N.; Gofarsh, M. M.; Prizrenova, I. I.; Sazonova, A. S.
269pp. (1976) [365 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 1.06r

Results of studies carried out at the Research Institute of Fish Industry Mechanization (NIKIMRP) are presented, as well as a survey of literature. The following chapters are included: Characteristics of microorganisms (pp. 7-22); Physiology of microorganisms (pp. 22-30); Effect of environment on microorganisms (pp. 30-51); Biochemical processes caused by the action of microorganisms (pp. 51-58); Microflora of fresh fish (pp. 58-86); Microflora of frozen fish (pp. 86-93); Microflora of salted fish (pp. 93-111); Microflora of smoked fish (pp. 111-121); Microflora of roe (pp. 121-127); Microflora of minced fish and fish products (pp. 127-132); Microflora of canned fish, and microbiological control of the canning process (pp. 132-170); Microflora of fish products for animal feeding and technical purposes (pp. 170-173); Use of antiseptic substances for fish and fish products preservation (pp. 173-185); Use of antibiotics for fish preservation (pp. 185-195); Application of physical methods for fish and fish products preservation (pp. 195-209); Food poisoning due to fish and fish products consumption (pp. 209-239); and Control of hygiene and sanitation at fish processing plants (pp. 239-244). STI

335

[Production of mild-salted fish.] Proizvodstvo slabosolenoi ryby. [Book]

Shenderyuk, V. I.
175pp. (1976) [138 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.48r

Technological characteristics of fish used in the USSR for the manufacture of mild-salted fish are described, covering raw material storage as well as fish processing. Domestic and foreign information on mild-salted fish ripening are discussed, in addition to hydrolysis and its control. The following chapters are included: Chemical characteristics of raw materials (pp. 6-28); Raw materials storage prior to salting (pp. 28-46); Production of mild-salted fish (pp. 46-102); Preserved fish production

and production of new types of mild-salted fish products (pp. 103-112); and Ripening of mild-salted fish (pp. 112-133). STI

336

[Mechanized processing of flat-fish.]

Mekhanizatsiya obrabotki kambalovykh ryb. [Book]

Degtyarev, V. N.

102pp. (1976) [39 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.32r

Some theoretical and practical problems of flat-fish (flounder) processing mechanization are discussed. The following chapters are included: Physico-mechanical properties of fish (pp. 5-57); and Technological equipment for flat-fish processing (pp. 57-100). STI

337

[Manufacture of fish sausages.] Proizvodstvo rybnikh kolbasnykh izdelii. [Book]

Rekhmina, I. I.; Budina, V. G.; Polyakova, L. K.; Verkhoturova, F. I.

64pp. (1976) [58 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.17r

Production processes used for the manufacture of fish sausages in the USSR are discussed. Raw material quality as well as quality of finished products are dealt with, and recipes for the production of fish sausages are presented. The following chapters are included: Raw material and general situation in the production of fish sausages (pp. 4-9); Cooked fish sausages (pp. 9-24); Fish sausages without casings (pp. 24-33); Smoked fish sausages (pp. 38-49); Equipment for the manufacture of fish sausages (pp. 49-56); Recipes for the production of fish sausages (pp. 56); and Production of fish sausages abroad (pp. 56-62). STI

MEAT AND POULTRY

338

Poultry products technology. [Book]

Mountney, G. J.

Ed. 2, ix + 369pp. ISBN 0-87055-199-X (1976) [many ref. En] Westport, Connecticut, USA; AVI Publishing Co., Inc. Price US \$19 Foreign \$20

This second revised edition of this textbook on poultry products and their processing includes the following chapters: The poultry industry (pp. 1-26, many ref.); Quality identification (pp. 27-42, 11 ref.); Quality maintenance (pp. 43-52, 29 ref.); Chemical and nutritive characteristics (pp. 53-66, 46 ref.); Measuring yields and characteristics (pp. 67-87, 21 ref.); Microbiology of poultry meat (pp.

88-104, 44 ref.); Water supply plant layout and sanitation (pp. 105-139, 29 ref.); Processing fresh poultry (pp. 140-154, 23 ref.); Packaging (pp. 155-166, 23 ref.); Refrigerated storage (pp. 167-177, 25 ref.); Canning poultry products and processing soups (pp. 178-192, 15 ref.); Dehydrating (pp. 193-206, 28 ref.); Curing and smoking (pp. 207-219, 14 ref.); Preservation by radiation (pp. 220-232, 17 ref.); Other processed products (pp. 233-259, 42 ref.); Cooking and barbecuing poultry (pp. 260-276, 20 ref.); Inedible by products (pp. 277-290, 26 ref.); Egg quality and identification (pp. 291-304, 7 ref.); Measuring egg quality (pp. 305-312, 8 ref.); Egg quality maintenance (pp. 313-319, 9 ref.); Eggs - physical, chemical, nutritional and functional characteristics (pp. 320-325, 8 ref.); Processing eggs (pp. 326-333, 8 ref.); and Methods of analysis of eggs and egg products (pp. 334-365, 7 ref.). A 3pp. subject index is included. AJDW

339

[Meat technology.] Technologie masa. [Book] Lat, J. 640pp. (1976) [Cs] Prague, Czechoslovakia; SNTL Price 47Kcs

The book is intended as a textbook for students of specialized schools and institutes as well as a handbook for technicians engaged in the meat industry and veterinary services. The following chapters are included: Hygiene and safety of labour (pp. 17-82); Slaughterhouse production (pp. 83-213); Meat cooling after slaughter (pp. 213-228); Meat cutting (pp. 228-284); Meat production (pp. 284-416); Preserves and semi-preserves manufacture (pp. 416-443); Manufacture of edible animal fats (pp. 443-478); Production of frozen meat (pp. 478-505); Transportation (pp. 506-517); Packaging and packaging techniques (pp. 517-551); Quality and quality control (pp. 551-561); Power engineering (pp. 562-602); and Effluents (pp. 603-622). STI

340

[Examination of slaughter animals and meat.] Schlacht-tier- und Fleischuntersuchung. [Book] Seybt, J.

201pp. (1975) [De] Jena, German Democratic Republic; VEB Gustav Fischer Verlag Price M25.70

This annotated compilation of legal requirements for examination of slaughter animals and meat in the German Democratic Republic includes the following sections: The ordinance for examination of slaughter animals and meat of 5 Nov. 1971 (pp. 21-68); Instructions for meat inspection (pp. 69-125); Standards for meat inspection (pp. 127-150); Regulations for export of meat and meat products to other COMECON countries (pp. 157-161); and Further legislation related to examination of slaughter animals and meat (pp. 162-188). A 2-pp. bibliography and an 11-page subject index are included. AJDW

341

[Technology of the poultry industry.] Technologia hydinarskeho priemyslu. [Book]

Okal, A.

311pp. (1976) [Sk] Bratislava, Czechoslovakia; Priroda. Price 15Kcs

The book is intended as a textbook for agricultural high schools and poultry industry schools. It includes the following chapters: Processing and consumption of eggs (pp. 7-123); Poultry slaughtering, and processing of poultry meat (pp. 124-276); Processing of feathers (pp. 277-302); and Problems and trends in poultry processing technology (pp. 302-308). STI

342

[Better and more profitable fattening of swine.] Schweine besser und rentabler füttern. [Book]

Büenfeld, V.; Schneider, W.

Ed. 5, 120pp. ISBN 3-7843-1068-0 (1976) [De] Münster-Hiltrup, Federal Republic of Germany; Landwirtschaftsverlag GmbH Price DM18.00

This revised edition of this detailed practical manual of pig feeding includes the following chapters: The basic economic principles of rearing of swine [including information on carcass quality, carcass grading, etc.] (pp. 9-20); The physiological basis of rearing of swine (pp. 21-31); Basic principles of pig feeds (pp. 32-54); Feeding of breeding swine and piglets (pp. 55-72); and Fattening of swine (pp. 73-120). AJDW

343

[Meat quality of Large White pigs selected from homogeneous and heterogeneous breeds according to backfat thickness.] (In „Genetika i selektsiya rastenii i zhivotnykh v Kazakhstane...")

Khusainov, Z. Kh.; Martynovich, A. I. Union of Soviet Socialist Republics, Kazakhskoe Obshchestvo Genetikov i Seleksionerov im. N. I. Vavilova

pp. 270-272 (1974) [Ru] Alma-Ata, USSR; Izdatel'stvo 'Kainar' [Kazakhskii Nauchno-issled. Inst. Zhivotnovodstva, USSR]

In an attempt to influence the meat quality, offspring of known 'fatty' and 'meaty' pigs (on basis of mean backfat thickness) were crossed as follows: meaty × meaty, fatty × fatty, fatty × meaty and meaty × fatty. 2 males and 2 females from each litter were fed to 100 kg wt., and then slaughtered. The pigs from the meaty × meaty cross had the lowest mean backfat thickness (2.8 cm), followed by the meaty × fatty cross (3.5 cm); they also had the highest meat content (54.0 and 52.5%, respectively) and the lowest fat content (34.0 and 35.5%). HBr

344

[Production characteristics of Estonian and Moscow Large White pigs.] (In „Genetika i selektsiya rastenii i zhivotnykh v Kazakhstane...") Khusainov, Z. Kh.; Titova, A. N. Union of Soviet Socialist Republics, Kazakhskoe Obshchestvo

Genetikov i Selektionerov im. N. I. Vavilova pp. 273-276 (1974) [Ru] Alma-Ata, USSR; Izdatel'stvo 'Kainar' [Kazakhskii Nauchno-issled. Inst. Zhivotnovodstva, USSR]

The results of crossing Estonian boars with Moscow sows on the production characteristics of their offspring are tabulated, covering carcass length and wt., muscle eye area, backfat thickness and carcass composition (% meat, fat, bone). Additionally, the chemical composition (protein, fat, moisture, ash) and calorific value of the meat were also determined. Results are discussed from the viewpoint of breed improvement. HBr

345

Sausage and processed meats manufacturing.

[Book]

Rust, R. E.

xii + 143pp. (1976) [En] PO Box 3556, Washington, DC 20007, USA; American Meat Institute [Dep. of Anim. Sci., Iowa State Univ., Ames, Iowa, USA]

This textbook (written for a home study course on sausages and prepared meats) includes the following chapters: The processed meat industry (pp. 1-9); Basic meat chemistry (pp. 11-15); Source and selection of meat ingredients (pp. 17-22); Non-meat ingredients (pp. 23-31); Spices and seasonings (pp. 33-38); Sausage casings (pp. 39-49); Manufacturing equipment and facilities (pp. 51-61); Smoking and cooking (pp. 63-65); Preblending and computer formulation (pp. 67-83); Manufacturing processes - fresh sausage (pp. 85-87); Manufacturing processes - cooked and smoked sausage (pp. 89-95); Manufacturing processes - fermented sausage, dry and semi-dry (pp. 97-101); Manufacturing processes - cooked hams (pp. 103-107); Manufacturing processes - meat canning (pp. 109-120); Packaging and order assembly (pp. 121-125); Quality control (pp. 127-135); and The spoilage of meat and meat products (pp. 137-140). Appendices include a meat colour chart, an RH chart, conversion and reference tables, and a selected list of references on meat and meat products. AJDW

346

Environmental quality and safety. Supplement Vol. V. Anabolic agents in animal production.

[Conference proceedings]

Lu, F. C.; Rendel, J. Food and Agriculture Organization; World Health Organization (Editors)

xiii + 277pp. ISBN 3-13-536101-2 (1976) [many ref. En, Fr] Stuttgart, Federal Republic of Germany; Georg Thieme Publishers [Rome, Italy]

The full text is given of papers presented at this symposium, including the following which relate to the occurrence, toxicity, etc. of residues in foods of animal origin: World production of animal protein and the need for a new approach, by H. A. Jasiorowski & K. El-Shazly (pp. 1-19, 25 ref., En); Role of growth hormone in improving animal production, by L. J. Machlin (pp. 43-53, 62 ref., En); General aspects of the effectiveness of

anabolic agents in increasing protein production in farm animals, in particular bull calves, by P. van der Wal (pp. 60-78, 38 ref., En); Human safety considerations from the use of anabolic agents in food producing animals, by A. C. Kolbye & M. K. Perez (pp. 212-218, 2 ref., En); Special toxicological considerations on anabolic agents - transmitted toxicity, by R. Ferrando & R. Truhaut (pp. 219-226, 15 ref., Fr, en); Carcinogenicity studies in animals relevant to the use of anabolic agents in animal production, by F. J. C. Roe (pp. 227-237, 63 ref., En); Epidemiological studies related to the use of hormonal agents in animal production, by F. Coulston & J. H. Wills (pp. 238-252, En), and Pharmacological and endocrinological studies on anabolic agents, by F. Neumann (pp. 253-264, 9 ref., En). A further 6 papers are abstracted separately in FSTA, and are in the author index under Food and Agriculture Organization [Anabolic Agents Symposium]. A 3pp. subject index is included. AJDW

347

Sausage products technology. [Book]

Karmas, E.

Food Technology Review, Noyes Data Corporation

No. 39. xi + 317pp. ISBN 0-8155-0646-5 (1977)

[En] Park Ridge, New Jersey, USA; Noyes Data Corporation Price \$39.00

The information in this book is based on US patents issued since the early sixties that deal with sausage products and their commercial technology. The book is divided into 2 parts: Emulsion ingredients; and Production methods. The information is arranged under the following headings: Color and flavor (pp. 4-58), including accelerated development and stabilization of cured colour, flavoring and coloring additives, prevention of rancid flavour, and fermented flavour; Emulsion stability (pp. 59-89), including texturing agents, and chemical emulsion stabilizers; Proteinaceous emulsion ingredients (pp. 90-123); Product control methods (pp. 124-142); Emulsion processing (pp. 144-162); Stuffing-linking-forming methods (pp. 163-215); Cooking and related methods (pp. 216-265), including cooking in hot air medium, cooking with steam, cooking in liquid medium, cooking with heat exchanger, and electrical cooking; Casing removal methods (pp. 266-275); and Various modified products (pp. 276-309), including fresh pork sausage, dry sausage, various conventional products, and novelty products. Company, inventor and US patent number indexes are included. VJG

348

Beef operations in the meat industry. [Book]

Kropf, D. H.; Breidenstein, B. C.

xi + 136pp. (1975) [En] Washington DC; American Meat Institute [Dep. of Animal Sci. & Ind., Kansas State Univ., Manhattan, Kansas, USA]

This revised edition of this textbook on beef operations includes the following chapters: Cattle production in the United States (pp. 1-11); Cattle

marketing (pp. 12-26); Cattle slaughter, dressing and ageing (pp. 27-39); Federal Meat Inspection (pp. 40-47); Beef carcass classification and grading (pp. 48-63); Basic beef carcass information (pp. 64-73); Beef breaking, boning and fabrication (pp. 74-89); Beef plant by-products (pp. 90-106); Meat distribution considerations (pp. 107-117); and Management considerations for beef operations (pp. 118-129). A 5-pp. glossary and a 2-pp. bibliography are included. AJDW

349

A colour atlas of meat and poultry inspection. [Book]

Wiggins, G. S.; Wilson, A.

339pp. ISBN 0-7234-0708-8 (1976) [En]

London, UK; Wolfe Medical Publications Ltd.

Price £7.50

This comprehensive full-colour atlas for meat inspection personnel includes a total of 342 annotated illustrations of pathological conditions of cattle, pigs, sheep, horses, and poultry. A 5-pp. index of pathological conditions and a 4-pp. index broken down by animal species and organ or tissue are given. AJDW

350

Meat animals. Growth and productivity.

[Conference proceedings]

Lister, D.; Rhodes, D. N.; Fowler, V. R.; Fuller, M. F. North Atlantic Treaty Organisation. Scientific Affairs Division (Editors)

xii + 541pp. ISBN 0-306-35608-2 (1976) [many ref. En] New York, USA; Plenum Publishing Corporation Price \$51.00 [Meat Res. Inst., Langford, Bristol, UK]

This publication (Volume 8 in the Life Sciences series of the NATO Scientific Affairs Division) gives the full text of papers presented at this symposium, including the following which give data for carcass quality, meat quality, etc.: What do we want from the carcass?, by D. N. Rhodes (pp. 9-24, 52 ref.); Towards more efficient meat animals: a theoretical consideration of constraints at the level of the muscle cell, by I. G. Burleigh (pp. 119-149, 52 ref.); The control of fat absorption, deposition and mobilization in farm animals, by W. M. F. Leat (pp. 177-193, 75 ref.); The nutritional control of growth, by V. R. Fowler (pp. 285-299, 20 ref.); Hormonal influences on the growth, metabolism and body composition of pigs, by D. Lister (pp. 355-371, 53 ref.); Observations of the apparent antagonism between meat producing capacity and meat quality in animals, by D. Steinhilber, J. H. Weniger & H.-P. Mäder (pp. 373-385, 16 ref.); Advances in pig technology, by A. Rerat (pp. 403-445, 239 ref.); Using the world's genetic resources, by I. L. Mason (pp. 463-481, 28 ref.); Vegetable protein as a human food - background and present situation, by T. Watanabe (pp. 485-498, 17 ref.); and Vegetable protein as a human food - research and development in the National Food Research Institute, by K. Saio (pp. 499-503, 8 ref.).

AJDW

351

[Equipment and materials for meat canning industry and auxiliary processes.] *Oborudovanie i materialy dlya myaso-konservnogo i vspomagatel'nykh proizvodstv.* [Book]

Gorbatov, V. M.

437pp. (1976) [numerous ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 1.75r

The book represents a collection of individual papers including: Equipment and materials for the manufacture of metal containers, by Ya. Yu. Lushkin (pp. 3-64); Technological equipment for meat canning plants, by Z. P. Gusakovskii (pp. 64-106); Materials, packaging and packaging equipment for meat and meat products, by N. F. Generalov, P. S. Gnoevoi & O. V. Bol'shakov (pp. 106-154); Metallic materials for the production and repair of meat cannery equipment, by N. F. Kazakov & A. P. Shishkova (pp. 154-194); Non-metallic materials for the manufacture and repair of meat cannery equipment, by S. V. Genel' (pp. 194-228); Conveyors, cutters and balances, by A. N. Saltykov & E. N. Lanovskaya (pp. 228-360); Equipment for the supply of electricity, by N. S. Muromova, Yu. A. Sapunov & I. K. Kozyrkin (pp. 360-392); and Equipment for the supply of heat, by A. N. Lepilkin, S. I. Nozdrin & A. M. Tertychnyi (pp. 392-427). STI

352

[Effectiveness of using new techniques in the meat and dairy industry.] *Effektivnost' primeneniya novoi tekhniki na predpriyatiyakh myasnoi i molochnoi promyshlennosti.* [Book]

Kovalev, N. A.

76pp. (1975) [Ru] Moscow, USSR; Pishchevaya Promyshlennost' Price 0.24r

This book, intended for students and economists in the meat and dairy industry, includes the following chapters: Estimating the economic effectiveness of introducing new techniques (pp. 5-24); and Complex estimates of the economic effectiveness of introducing new techniques (pp. 25-75), covering use of separators, lines for production of sterilized milk, homogenizers, lines for production of butter, packaging lines for milk products, lines for production and packaging of meat products etc. STI

353

Principles of cattle production. [Conference proceedings]

Swan, H.; Broster, W. H. (United Kingdom, University of Nottingham) (Editors)

438pp. ISBN 0-408-70720-8 (1976) [many ref. En] London, UK; Butterworth & Co. Ltd. Price £14.40 [Fac. of Agric. Sci., Univ. of Nottingham, Nottingham, UK]

The full text is given of papers presented at this symposium, (the 23rd University of Nottingham Easter School in Agricultural Science), including the following which contain information relating to

meat and/or milk production and quality: The structure of the British cattle industry, by J. A. Craven & J. B. Kilkenny (pp. 1-43); Amino acid supply as a limiting factor in milk and muscle synthesis, by T. B. Mepham (pp. 201-219, 49 ref.); Nutritional influences on milk quality, by J. A. F. Rook (pp. 221-236, 58 ref.); Plane of nutrition for the dairy cow, by W. H. Broster (pp. 271-285, 57 ref.); Conserved forage - complement or competitor to concentrates, by J. C. Tayler & R. J. Wilkins (pp. 343-364, 68 ref.); Selection for milk and beef characteristics - collateral or independent, by C. J. M. Hinks (pp. 365-372, 25 ref.); Practical beef cattle improvement, by R. C. Willham (pp. 387-404, 1 ref.); and The future - milk versus beef or milk and beef, by D. M. Allen (pp. 405-418, 6 ref.). AJDW

354

[Studies on the carcass quality of pure- and cross-bred lambs, using total dissection.]

Untersuchungen über die Schlachtkörperqualität von Reinzucht und Kreuzungslämmern mit Hilfe der Totalzerlegung. [Book]

Popp, T.

101pp. ISBN 3-490-11591-0 (1977) [many ref. De] Hamburg, Federal Republic of Germany; Verlag Paul Parey

This monograph, No. 35 in the series 'Giessner Schriftenreihe Tierzucht und Haustiergenetik' gives a detailed account of total dissection studies on effects of crossbreeding and feed regime on carcass quality. A total of 212 lambs (including purebred German Blackheaded Mutton sheep, their F_1 crosses with Finnish Landrace, and backcrosses) was used in the studies. Effects of crossing Finnish Landrace $\times$ dairy breed sires with German Blackheaded dams were also studied. Lambs were fed to preselected ages or slaughter wt. on concentrates ad lib. + 50 or 400 g hay/day, or concentrates at 2% of live wt. + 400 g hay/day. Tables of results are given for fat thickness, longissimus dorsi muscle and fat areas, % various cuts, and the meat, fat and bone % in the carcass and in individual cuts. Fattening to slaughter wt. > 40 kg resulted in excessive fatness in the German Blackheaded Mutton lambs. Feed regime had relatively little effect on carcass composition. High feeding intensity slightly increased the l. dorsi muscle area; the higher level of hay fed gave less fat deposition. Feeding concentrates at 2% of live wt. gave low growth rates and excessive fat deposition. Carcass quality of the Finnish Landrace crossbreds was inferior to that of the Blackheaded lambs; backcrossing the F_1 crosses to the Blackheaded breed gave lambs of similar carcass quality to the purebred Blackheaded animals. Carcass quality of the Finnish Landrace $\times$ dairy breed-sired lambs was similar to that of the purebred Blackheaded lambs. [Continued in following abstr.] AJDW

355

[Studies on the carcass quality of pure- and cross-bred lambs, using total dissection.]

Untersuchungen über die Schlachtkörperqualität von Reinzucht und Kreuzungslämmern mit Hilfe der Totalzerlegung. [Book]

Popp, T.

101pp. ISBN 3-490-11591-0 (1977) [many ref.

De] Hamburg, Federal Republic of Germany;

Verlag Paul Parey

[Continued from preceding abstr.] Correlations between carcass composition and individual subjective judgements or carcass measurements were generally low. The potential for prediction of meat, fat and bone % on the basis of carcass wt., measurements, etc. is briefly discussed. AJDW

356

[Use of enzymes in meat processing.] *Primenenie fermentov dlya obrabotki myasa.* [Book]

Ratushnyi, A. S.

85pp. (1976) [85 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.31r

Attention is paid to processing methods designed to ensure uniform enzyme distribution throughout the meat processed. It is concluded that the most suitable methods are immersion of meat pieces into the enzyme solution or enzyme injection into the meat. Injection of the enzyme into the blood system of live animals or application of dried enzyme to the meat surface were less suitable. The following chapters are included: Enzymes used for meat processing (pp. 6-25); Proteolytic activity of enzymes used for meat processing (pp. 25-44); Processing methods (pp. 44-57); Enzyme-treated meat evaluation methods (pp. 57-77); and Hygiene and sanitation, and microbiological testing of enzyme preparations (pp. 77-80). STI

ADDITIVES

357

Natural flavouring substances, their sources, and added artificial flavouring substances. *Matières aromatisantes naturelles, leurs sources, et matières aromatisantes artificielles ajoutées.* [Book]

Council of Europe

463pp. ISBN 2-7160-0043-3 (1974) [En, Fr] Strasbourg, France; Maisonneuve

This book commences with a general introduction on the aims of the study, the general principles involved, and an explanation of the lists of natural and artificial flavouring substances. The preamble to each chapter is in English and French. Chapters included are: List of natural flavouring substances and their sources (pp. 23-116); Artificial

flavouring substances which may be added to foodstuffs without hazard to public health (pp. 117-271); Artificial flavouring substances which may be added temporarily to foodstuffs without hazard to public health (pp. 273-342); Artificial flavouring substances not fully evaluated (Sections A and B) (pp. 343-413); and Guide to the testing and toxicological evaluation of flavouring substances (pp. 403-410). The following facts are tabulated for each natural flavouring substance: Council of Europe number, Codex Veg. Steinmetz number, botanical name, English name, French name, parts used, parts forbidden, classification, and limitations on the active component. The lists of artificial flavours are all chemical classifications presenting serial number, formula, systematic name, synonym and limit of use of the flavouring. An alphabetical classification is presented (pp. 427-463) consisting of 4 alphabetical lists: serial 1-2000, 2001-4000, 4001-6000, 6001-7000. VJG

358

Natural gums for edible purposes. [Book]

Lawrence, A. A.

Food Technology Review, Noyes Data Corporation No. 36, xii + 338pp. ISBN 0-8155-0631-7 (1976) [En] Park Ridge, New Jersey, USA; Noyes Data Corp. Price \$39.00

This book is based on US patents issued since the early 1960's that deal with natural gums for edible purposes. The information is arranged under the following headings: Arabinogalactan (pp. 3-16) including process modifications and uses; Galactomannans (pp. 17-57); Pectins (pp. 58-103) including preparation and uses in jelly compositions, medicines, and baked goods; Gums from other land plants (pp. 104-131) including tragacanth, tamarind polysaccharide, and gum arabic; Alginates (pp. 132-186) including alginic acid and alginate preparations, improving properties of alginates, alginate desserts gels and milk puddings, and other uses; Carrageenans (pp. 187-237) including extraction techniques, dessert gels and other uses; Material from other marine sources (pp. 238-251) including agar and furcellaria extract; Xanthomonas hydrophilic colloid (pp. 252-302); Other microbial polysaccharides (from Arthrobacter microorganisms, Sclerotium moulds, Alcaligenes faecalis, and Azotobacter vinelandii) (pp. 303-318); and Miscellaneous reactions and products (pp. 319-329). Company, inventor and US patent number indexes are included. VJG

359

Herbs for health and flavour. [Book]

Law, D.

62pp. ISBN 0-7028-1070-3 (1975) [En] Edinburgh, UK; John Bartholomew & Son Ltd.

This book provides an introduction to the use of herbs for medicinal purposes and cooking. The illustrations provide an easy aid to identifying the herbs, many of which can be found growing wild. Chapters included are: Sandwiches which go one better (p. 7); Omelettes (pp. 8-9); Soups (pp. 9-10); Biscuits (p. 10); Salads (pp. 11-12); and Herbs

used in preparing or garnishing meat, fish and poultry (pp. 13-14). Under each of these headings the individual herbs are listed together with suggested food accompaniments. Additional chapters are: Index of illnesses, with herbs whole healing virtues can bring relief (pp. 14-16); and Preparing herbs for medicinal use (pp. 17-18). A list of herb varieties and illustrations - agrimony, alexander, angelica, basil, bay, bistort, burdock, caraway, cardamon seeds, chamomile chervil, chickweed, chive, comfrey, coriander, cowslip, elder, fennel, goosegrass, group ivy, groundsel, hazel, horseradish, lavender, liquorice, love-in-the-mist, lungwort, marigold, marjoram, marsh mallow, meadow-sweet, mustard, nasturtium, parsley, ransom, ratstail plantain, rosemary, rue, sage, salad burnet, samphire, sloe, sorrel, southernwood, sweet chestnut, thyme, and water cress (pp. 18-62), is presented. VJG

360

Phenolic, sulfur, and nitrogen compounds in food flavors. [Conference proceedings]

Charalambous, G.; Katz, I. United States of America, American Chemical Society (Editors) vii + 215pp. ISBN 0-8412-0330-X (1976) [many ref. En] Washington, DC, USA Price \$17.75 [Anheuser Busch Inc., St. Louis, Missouri, USA]

Papers presented at the symposium sponsored by the Division of Agricultural and Food Chemistry at the 170th Meeting of the American Chemical Society, in Chicago, Illinois, on Aug. 25-26, 1975 (and published as No. 26 in the ACS Symposium Series, under the general editorship of R. F. Gould) include: Role of flavones and related compounds in retarding lipid-oxidative flavor changes in foods, by D. E. Pratt (pp. 1-13, 37 ref.); Reaction products of α -dicarbonyl compounds, aldehydes, hydrogen sulfide, and ammonia, by H. J. Takken, L. M. van der Linde, P. J. de Valois, H. M. van Dort & M. Boelens (pp. 114-121, 8 ref.); Non-enzymic transamination of unsaturated carbonyls: a general source of nitrogenous flavor compounds in foods, by G. P. Rizzi (pp. 122-132, 14 ref.); Identification and flavor properties of some 3-oxazolines and 3-thiazolines isolated from cooked beef, by C. J. Mussinan, R. A. Wilson, I. Katz, A. Hruza & M. H. Vock (pp. 133-145, 17 ref.); and Cat neural taste responses to nitrogen compounds, by J. C. Boudreau, V. Collings, J. Oravec, W. Anderson & T. E. Nelson (pp. 194-206, 23 ref.). A further 7 papers are abstracted separately and are in the author index under United States of America, American Chemical Society [Flavours Symposium]. AL

361

Antioxidants. Syntheses and applications. [Book]

Johnson, J. C.

Chemical Technology Review No. 44, xii + 320pp. ISBN 0-8155-0562-0 (1975) [En] Park Ridge, New Jersey, USA; Noyes Data Corp. Price \$36.00

The book is based on US patents since 1972 relating to antioxidants. Information is arranged

under the following headings: Introduction - test methods (pp. 1-2); Phenolic antioxidants (pp. 3-23); Sulfur-containing phenolic antioxidants (pp. 24-38); Nitrogen-containing phenolic derivatives (pp. 39-59); Amine and imine antioxidants (pp. 60-80); Triazine and cyanurate antioxidants (pp. 81-105); Phosphorous-containing antioxidants (pp. 106-129); Other antioxidant compounds (pp. 130-148); Stabilized petroleum products (pp. 149-183); Antioxidants for synthetic lubricants and functional fluids (pp. 184-221); Antioxidants for elastomers (pp. 222-242); Polyolefin antioxidant systems (pp. 243-281); Antioxidants for other polymers (pp. 282-293); Antioxidants for foods (pp. 294-308). Company, inventor and US patent number indexes are included. VJG

362

Food acid manufacture. Recent developments. [Book]

Lawrence, A. A.

Chemical Technology Review No. 31, Xi + 302pp. ISBN 0-8155-0531-0 (1974) [En] Park Ridge, New Jersey, USA; Noyes Data Corp. Price \$36.00

This book is based on US patents since the early 1960s relating to the manufacture of acidulant food acids with special emphasis on recent developments. The information is arranged under the following headings: Citric acid (pp. 2-74); Fumaric acid (pp. 75-121); Adipic acid (pp. 122-204); Succinic acid (pp. 205-225); Malic acid (pp. 226-241); Tartaric acid (pp. 242-247); and Lactic acid (pp. 248-294). Company, inventor and US patent number indexes are included. VJG

363

Sweeteners and enhancers. [Book]

Pintauro, N. D.

Food Technology Review, Noyes Data Corporation No. 40, xi + 392pp. ISBN 0-8155-0652-X (1977) [En] Park Ridge, New Jersey, USA; Noyes Data Corporation

This book is based on US patents that deal with sweeteners and sweetness enhancers and their commercial technology. 11 British patents have been included to complete the technological picture. The information is arranged under the following headings: Miraculin, glycyrrhizin and artichoke sweeteners (pp. 3-34); Dipeptides (pp. 35-60) including aspartic acid alkyl esters, α -L-aspartyl derivatives; Chalcones and maltols (pp. 61-90) including flavanone glycoside dihydrochalcones, hesperetin dihydrochalcone; Other synthetic sweeteners (pp. 91-142) including diacetone glucose, saccharin amine salts, tryptophan derivatives, substituted tetrazoles, 8,9-epoxyperillartine sweeteners, 5-imino-4, 4-dimethyl-2-imidazolidinone, kynurenine derivatives, heliotropyl nitrile, 2-(3-bromopropoxyl)-S-nitroaniline, 3-amino-4-n-propoxybenzyl alcohol, PMCA, special oximes, stevioside, maltitol and lactitol sweeteners; Saccharin combinations and special formulations (pp. 143-178); Methods for increasing bulk of

mixes (pp. 179-241); Sugar substitutes and speciality ingredients (pp. 242-287); Drinks, jellies, fruits and chewing gum (pp. 288-349); and Desserts and baked goods (pp. 350-385). Company, inventor and US patent number indexes are included. VJG

364

Processed foods and the consumer. Additives, labeling, standards, and nutrition. [Book]

Packard, V. S., Jr.

vi + 359pp. ISBN 0-8166-0778-8 (1976) [many ref. En] Minneapolis, Minnesota, USA; University of Minnesota Press Price \$12.00 (cloth); \$5.95 (paperback) [Dep. of Food Sci. & Nutr., Univ., Minneapolis, Minnesota, USA]

This book discusses problems of paramount importance to the consumer concerning processed foods that are sold in the market place. It will serve as a textbook for classes in food science or technology, nutrition, dietetics, institutional food management, and related courses, and as a reference work for those in food industries and regulatory health agencies, and for the concerned public. Chapters included are: Food definitions and standards (pp. 3-25); Food names (pp. 26-42); Food additives (pp. 43-59); Food flavor (pp. 60-78); Food color (pp. 79-96); Food preservatives (pp. 97-118); Emulsifiers and stabilizers (binders and thickeners) (pp. 119-125); Toxic metals in food (pp. 126-144); Poisons and antinutritional factors in 'Natural' foods (pp. 145-168); Natural/organic foods (pp. 169-177); Nutrients, nutrient sources, and label information (pp. 178-219); Foods and food supplements, their labels and use (pp. 220-245); and Nutritional quality guidelines (pp. 246-262). [Continued in following abstr.] VJG

365

Processed foods and the consumer. Additives, labeling, standards, and nutrition. [Book]

Packard, V. S., Jr.

vi + 359pp. (1976) [many ref. En] Minneapolis Minnesota, USA; University of Minnesota Press Price \$12.00 (cloth); \$5.95 (paperback) [Dep. of Food Sci. & Nutr., Univ., Minneapolis, Minnesota, USA]

[Continued from preceding abstr.] 7 appendices are included: Standards of identity for foods (pp. 265-292); Categories of additive functions as used in the regulation of food ingredients (pp. 293-295); 101 varieties of food additives (pp. 296-309); Food categories used in the regulation of food ingredients (pp. 310-312); A listing of some natural and artificial flavouring compounds (pp. 313-328); Some commonly used chemical preservatives (pp. 329-331); and Cyclamates: a chronology of confusion (pp. 332-336). A 'Glossary of terms' (pp. 337-341) and a 'Select bibliography' (pp. 345-350) are also included. VJG

366

Microbial production of nucleic acid-related substances. [Book]

Ogata, K.; Kinoshita, S.; Tsunoda, T.; Aida, K. (Editors)

xviii + 348pp. ISBN 0-470-15167-6 (1976)

[many ref. En] 12-21 Otowa 2-chome, Bunkyo-ku, Tokyo 112, Japan; Kodansha Ltd. & New York, USA; John Wiley & Sons Price £18.25; \$30.00

[Dep. of Agric. Chem., Fac. of Agric., Kyoto Univ., Sakyo-ku, Kyoto 606, Japan]

This book presents a survey by leading scientists in Japan, of all essential aspects of the microbial production and utilization of nucleic acid-related substances. It is divided into 5 parts: Fundamental principles in the production of nucleic acid-related substances (pp. 3-51); Production and hydrolysis of nucleic acids (pp. 55-121); Production of nucleic acid-related substances by fermentation (pp. 125-236); Production of nucleic acid-related substances from added precursors (pp. 239-295); and Utilization of nucleic acid-related substances (pp. 299-343). Chapters included are: Microbial nucleolytic enzymes - variety and classification (pp. 3-23, 145 ref.); Nucleotide biosynthesis and its regulation (pp. 24-37, 25 ref.); Separation and determination of nucleic acid-related substances (pp. 38-51, 123 ref.); Production of RNA (pp. 65, 34 ref.); Extracellular accumulation of DNA by microorganisms (pp. 66-74, 18 ref.); Hydrolysis of nucleic acids with *Penicillium* nuclease (pp. 75-86, 32 ref.); Hydrolysis of nucleic acids with *Streptomyces* enzymes (pp. 87-100, 90 ref.); Degradation of cellular RNA by endogenous enzymes (pp. 101-111, 122 ref.); Production of nucleotides from RNA by chemical processes (pp. 112-121, 44 ref.). [Continued in following abstr.] VJG

367

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xviii + 348pp. ISBN 0-470-15167-6 (1976)

[many ref. En] 12-21 Otowa 2-chome, Bunkyo-ku, Tokyo 112, Japan; Kodansha Ltd. & New York, USA; John Wiley & Sons Price £18.25; \$30.00

[Dep. of Agric. Chem., Fac. of Agric., Kyoto Univ., Sakyo-ku, Kyoto 606, Japan]

[Continued from preceding abstr.] Production of IMP (pp. 125-156, 104 ref.); Production of GMP (pp. 157-183, 70 ref.); Production of other nucleic acid related substances (pp. 184-205, 3 ref.); Effects of oxygen and carbon dioxide in nucleoside fermentation (pp. 206-212, 21 ref.); Phosphorylation of nucleosides (pp. 213-225, 52 ref.); Interconversion of nucleosides (pp. 226-236, 39 ref.); Production of nucleosides and nucleotides (pp. 239-247, 27 ref.); Production of nucleotide coenzymes (pp. 248-263, 12 ref.); Production of sugar nucleotides (pp. 264-280, 27 ref.); Production of other nucleoside derivatives (pp. 281-295, 29 ref.); Utilization in foods (pp. 299-319, 57

ref.); Utilization for medical treatment (pp. 320-332, 57 ref.); and Nucleoside-related antibiotics (pp. 333-343, 107 ref.). VJG

368

[Manufacture of mayonnaise.] Proizvodstvo maionezii. [Book]

Shmidt, A. A.; Dudina, Z. A.; Chekmareva, I. B. 133pp. (1976) [41 ref. Ru] Moscow, USSR;

Pishchevaya Promyshlennost'. Price 0.45r

This book includes the following chapters: Emulsion formation and stability (pp. 5-34); Choice, utilization and recipes (pp. 34-41); Mayonnaise production technology (pp. 41-75); Equipment used for mayonnaise production (pp. 75-108); Quality control methods (pp. 108-125); and Hygiene and sanitation, and safety of labour at mayonnaise producing plants (pp. 125-133). STI

LEGISLATION

369

[German food manual. 5th Supplement. February 1973.] Deutsches Lebensmittelbuch. 5. Lieferung. Februar 1973. [Booklet.]

Franck, R.; Nüse, K.-H. Germany, Federal Republic of, Deutsche Lebensmittelbuch-Kommission (Editors)

112pp. (1973) [De] Cologne, Federal Republic of Germany; Carl Heymanns Verlag AG

This publication gives the revised text of German Food Manual Commission guidelines for food products, and brings the German Food Manual up to date as of Feb. 1973. Products covered in this supplement include the following: colorants and related materials; preservatives; edible fungi; frozen foods; fish and other sea-foods; fruit juices; pudding mixes; pasteurized gherkins; processed fruit products; and honey. A subject index is included. AJDW

370

[German food manual. 6th Supplement. November 1975.] Deutsches Lebensmittelbuch. 6. Lieferung. November 1975. [Booklet]

Franck, R.; Nüse, K.-H. Germany, Federal Republic of, Deutsche Lebensmittelbuch-Kommission (Editors)

216pp. (1975) [De] Cologne, Federal Republic of Germany; Carl Heymanns Verlag AG Price DM50.00

This publication gives the revised text of German Food Manual Commission guidelines for food, and brings the manual up to date as of Nov. 1975. Products covered in this supplement include: long shelf-life bakery products; oilseeds and

confectionery prepared therefrom; edible fungi; frozen foods; fish and other sea-foods; meat and meat products; fruit juices; pudding mixes; processed vegetables; pasteurized gherkins; processed fruit; and margarines. A subject index is included. AJDW

371

[Food legislation. Collected texts. Supplement March, 1976.] Lebensmittelrecht. Textsammlung. Ergänzungslieferung Stand März 1976. [Book] Zipfel, W. (Editor)
340pp. ISBN 3-406-06142-7 (1976) [De]
Munich, Federal Republic of Germany; Verlag C. H. Beck Price DM19.80

This publication (the 12th supplement to the 6th edition or the 5th supplement to the 8th edition of this loose-leaf series) contains supplements and amendments to food legislation in the Federal Republic of Germany, which are hereby updated to 1 March, 1976. [See FSTA (1976) 8 11U633 for the preceding supplement.] AJDW

372

[Legislation for foods and items of utility. Commentary.] Lebensmittel- und Bedarfsgegenständegesetz Kommentar. [Book] Kloesel, A.; Sperlich, H.; Bergner, K.-G.
xix + 249pp. ISBN 3-8047-0519-7 (1975) [De]
Stuttgart, Federal Republic of Germany; Wissenschaftliche Verlagsgesellschaft mbH Price DM34.00

A detailed commentary is given on recent legislation for foods in the Federal Republic of Germany, including the Law for Foods and Items of Utility, and the Law for Total Reform of Food Legislation. Appendices give commentaries on other laws of concern to the food industry, including the Food Law of 1927, the Ordinance for Packaged Products, Guidelines for Prevention of Deceptive Packaging of Confectionery, and legislation relating to drugs, feeds, and the accuracy of filling wt. or vol. of packaged products. AJDW

373

[Food legislation. Classified by food.] Legislación alimentaria. Clasificada por alimentos. [Book] Spain, Centro Nacional de Alimentación y Nutrición
204pp. (1976) [Es] Madrid, Spain

This publication consists of a compilation of 1975 modifications and additions to legislation for foods in Spain. Aspects covered are: Responsibilities of the food hygiene directorate; Registration of food producers and products; Labelling of packaged foods; Ham and other processed pork products; Quality of carcasses of swine, cattle and sheep; Canned fish and other sea-foods; Eggs and egg products; Butter; Pasta products; Special breads; Nougat and marzipan; Caramels and chewing gums; Honey; Dehydrated soups and broths; Packaged mineral waters; Ice creams and sorbets; Refreshing beverages; Beers; and Flavouring agents. AJDW

374

[Food legislation. Collected texts. Supplement, June 1976.] Lebensmittelrecht. Textsammlung. Ergänzungslieferung Stand Juni 1976. [Booklet] Zipfel, W.
310pp. ISBN 3-406-06143-5 (1976) [De]
Munich, Federal Republic of Germany; Verlag C. H. Beck. Price DM18.80

This publication, the 13th supplement to the 6th edition or the 6th supplement to the 8th edition of this loose-leaf collection) gives the text of recent amendments and additions to food legislation in the Federal Republic of Germany, and brings the series up to date as of 1 June 1976. [See also FSTA (1977) 9 3U202]. AJDW

375

[Health problems of food and nutrition.] Warunki zdrowotne żywności i żywienia. [Book] Sadowska, H.
420pp. (1976) [21 ref. Pl] Warsaw, Poland; Państwowy Zakład Wydawnictw Lekarskich. Price 70zl

This book deals with legislation related to food products and nutrition. The following chapters are included: Legislation on food and food products throughout the world (pp. 15-48); Food and food products legislation in Poland (pp. 49-254); and Individual acts, decrees, rules and regulations (pp. 255-413). STI

376

[Meat hygiene legislation. 20 Supplement (July 1976).] Fleischhygienerecht. 20. Ergänzungslieferung (Stand Juli 1976). [Booklet] Dutschke, G.
100pp. (1976) [De] Hamburg, Federal Republic of Germany; Paul Parey Price DM39.00

This 20th supplement to this loose-leaf collection of Federal German legislation for meat and meat products brings the series up to date as of July 1976. Aspects covered include the following: exceptions from the provisions of paragraph 37 section 2 of the poultry meat hygiene regulations; amendments to the regulations for the min. hygiene requirements for poultry meat; and amendments to the regulations for official inspection of slaughter poultry and poultry meat. [See also FSTA (1969) 1 9D543]. AJDW

377

[Food legislation. Collected texts. Supplement, September 1976.] Lebensmittelrecht. Textsammlung. Ergänzungslieferung, Stand September 1976. [Book] Zipfel, W.
200pp. ISBN 3-406-06714-X (1976) [De]
Munich, Federal Republic of Germany; Verlag C. H. Beck Price DM11.80

This publication (the 14th supplement to the 6th edition, and the 7th supplement to the 8th edition of this loose leaf collection) includes the text of additions and amendments to legislation for foods

and drinks in the Federal Republic of Germany up to Sept. 1976. [See FSTA (1977) 9 5U285 for the preceding supplement.] AJDW

378

[Food legislation. Classified by food. II.]

Legislation alimentaria. Clasificada por alimentos.

II. [Book]

Spain, Centro Nacional de Alimentacion y Nutricion

140pp. (1976) [Es] Madrid, Spain

This second volume of this loose-leaf collection of Spanish legislation (with amendments, corrections, etc.) for foods and beverages covers the following aspects: establishments selling foods and beverages in public places; prohibition of dogs in food-handling premises; the register of food products, etc.; polymeric materials in the food industry; trade in game; foreign trade in living crustacea; additives in yoghurt; cheese; analysis of edible oils; various types of bread; pasta products; nougat and marzipan; honey; additives in salt and brines; wine vinegar and marc vinegar; cocoa, chocolate, chocolate products and chocolate substitutes; dietetic foods; dehydrated soups; medicinal mineral waters; ice cream; soft drinks; beer; vineyards; wines and other alcoholic beverages; labelling of wines; sparkling wines; brandy; rum; whisky; cider and perry; sangria and other wine-based beverages; and flavouring agents. [See FSTA (1977) 9 4U224 for Vol. I.] AJDW

YEASTS

379

[Automation of yeasts drying plants.]

Avtomatizatsiya sushil'nykh ustanovok dlya drozhzhei. [Book]

Anufriev, V. V.; Shishatskii, Yu. I.

69pp. (1976) [34 ref. Ru] Moscow, USSR;

Pishchevaya Promyshlennost'. Price 0.24r

This book deals with the present situation and future trends in the automation of bakers' and fodder yeast drying plants. The following chapters are included: Yeast drying plants (pp. 5-34); Automatic control of individual drying operations (pp. 34-64); and Economics of the automation of drying plants (pp. 64-69). STI

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